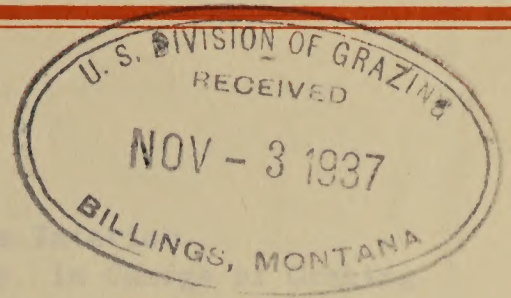


*A H Shunk*

ADMINISTRATIVE ORGANIZATION OF THE DIVISION OF GRAZING  
DEPARTMENT OF THE INTERIOR



# THE GRAZING BULLETIN

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DIVISION OF GRAZING

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OCTOBER 1937

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# ADMINISTRATIVE ORGANIZATION OF THE DIVISION OF GRAZING DEPARTMENT OF THE INTERIOR

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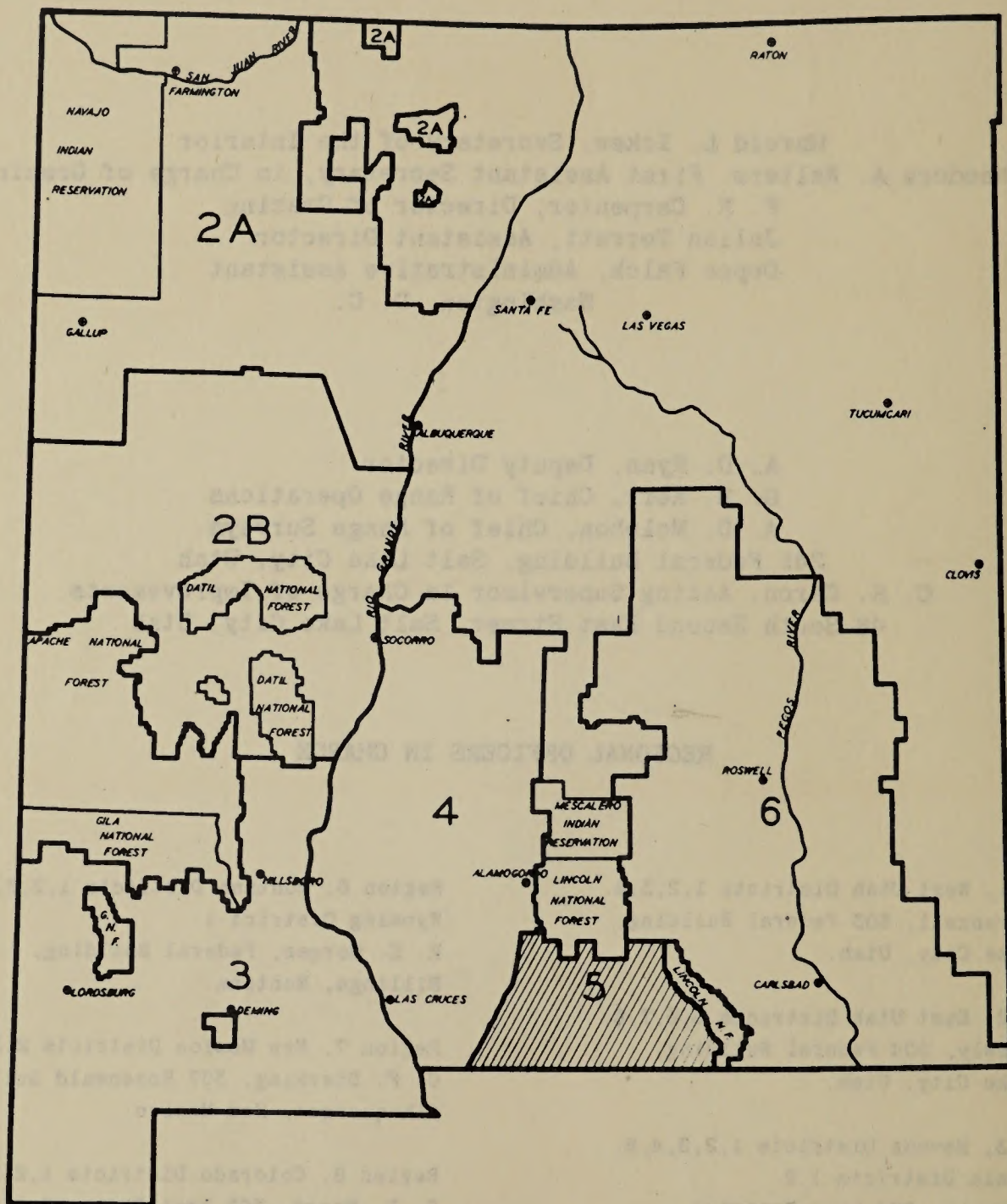
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## NEW MEXICO GRAZING DISTRICTS

### DIVISION OF GRAZING

ALBUQUERQUE E.C.W. DRAFTING OFFICE

JAMES HARRIS — ENROLLEE DRAFTSMAN

JULY 1, 1937

# THE GRAZING BULLETIN

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Vol. 1, No. 5.

October 1937.

Harold L. Ickes  
Secretary of the Interior

F. R. Carpenter  
Director of Grazing

Published by authority of the Secretary of the Interior  
for administrative information and as a requisite  
for the transaction of official business.

## A REPORT

on

NEW MEXICO GRAZING DISTRICT NO. 5

with

FOREWORD, CHARTS, MAPS, AND ILLUSTRATIONS

Assembled preparatory to determination

of preferences for term permits under

section 3 of the act of June 28, 1934

(48 Stat. 1296) as amended June 26,

1936 (49 Stat. 1976).

## FOREWORD

At the time the Taylor Grazing Act was passed, accurate data were not available either as to the proper carrying capacity of the public range or as to the carrying capacity and facilities of private properties used in connection therewith. Range surveys in all of the ten States were begun by the Division of Grazing shortly after the creation of the first grazing district in 1935. The survey of two typical districts, one in the south where water controls the use of the range and one in the north where feed controls the use of the range, has been carried to completion in order to furnish the facts upon which to establish the principle governing the issuance of term permits.

New Mexico Grazing District No. 5 was selected as a grazing district typical of a range dependent upon artificially developed water. Colorado Grazing District No. 6 was selected as a grazing district typical of a range dependent for its proper use upon the artificially produced or native forage on privately controlled lands. The results of the survey and study of New Mexico Grazing District No. 5 are presented herewith and show that prior to the passage of the Taylor Grazing Act 98.4 percent of the public range within that district was properly serviced with artificially developed water and that the issuance of grazing term permits in that district based upon a proper valuation of such water will be accepted by all of the local users as a fair and proper distribution of public range. The range survey and study for Colorado Grazing District No. 6 are now nearing completion and will be set forth in a bulletin similar to this in January 1938.

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## INTRODUCTION

The Taylor Grazing Act, as amended June 26, 1936, authorized the Secretary of the Interior to place in grazing districts a total of not to exceed 142,000,000 acres of vacant, unappropriated, and unreserved lands from any part of the public domain and which, in his opinion, are chiefly valuable for grazing and raising forage crops. Under this act the Secretary of the Interior is directed to make provision for the protection, administration, regulation, and improvement of such grazing districts as may be created, to regulate their occupancy and use, to preserve the land and its resources from destruction or unnecessary injury, to provide for the orderly use, improvement and development of the range.

Section 3 of the act provides for issuance of grazing permits to citizens of the United States or those who have filed the necessary declarations of intention to become such, upon the payment annually of reasonable fees in each case to be fixed or determined from time to time. Permits shall be for a period of not to

exceed ten years, subject to the preference right of the permittees to renewal in the discretion of the Secretary of the Interior, who shall specify from time to time numbers of livestock and seasons of use. Preference in the issuance of grazing permits shall be given to persons who are landowners engaged in the livestock business, bona fide occupants or settlers, or owners of water or water rights as may be necessary to permit the proper use of lands, water or water rights owned, occupied, or leased by them.

Specifically the purposes of the act are twofold: first, to rehabilitate the range by preventing overgrazing by means of regulations providing for orderly use, improvement, and development; secondly, to stabilize the dependent livestock industry by administering the use of the public range land in such a manner that it will be possible for the stock grower to plan his annual operations over a period of years with reasonable assurance against invasion by others who may disregard his rights of prior settlement.

## ADMINISTRATION OF GRAZING DISTRICTS

The administrative agency is the Division of Grazing, which consists of the Director of Grazing and a staff of assistants experienced in Departmental functions or in the livestock business. Each of the ten Western States constitutes a region and is under the supervision of a regional grazer. Local advisory boards whose members are chosen by election from qualified applicants for grazing privileges are under the supervision of the Division of Grazing and convene at the call of the regional grazer for the purpose of making recommendations on questions pertaining to all internal affairs of the grazing district they represent. Upon the recommendation of the advisory boards and the approval of the regional grazer, permits for a period not to exceed ten years will be issued. As there are many factors involved, however, permits of this nature cannot be issued until all necessary data are obtained. This includes the carrying capacity of the public range and the set-up of each applicant. Essentially, a systematic inventory of range and ranch is necessary for equitable determination of range privileges. Rules approved by the Secretary of the Interior March 2, 1936, provided that "permits within section 3 of the act of June 28, 1934 (48 Stat. 1296), shall be issued as soon as the necessary data are available upon which to ascertain the proper use of the lands and water

which entitle their owners, occupants or lessees to preferential grazing privilege. During the intervening period, temporary licenses will be issued under authority of section 2 of said act to provide for the existing livestock industry using the public lands in such districts." As amended January 28, 1937, authority to issue temporary licenses was continued in each grazing district until such time as the necessary data are available upon which to issue permits. Meanwhile a range survey program of sufficient scope to obtain all basic facts was under way. Personnel consists of trained experts of the Division of Grazing who plan and supervise the work. They are assisted by boys recruited from the 45 CCC camps that were allotted to the Division of Grazing under the Emergency Conservation Act of 1933. The boys are given intensive training in fundamentals before commencing actual field work. Parties are then taken to the field and launched on the mapping of vegetation, topography, cultural features, improvements, stock water--in fact everything that pertains to livestock operations on western ranches and ranges. The public domain that remained for inclusion in grazing districts consists of the "left-over" lands that by their very nature are unsuitable for settlement under any of the public land laws. The pattern of ownership, including Federal, State and private, in most

districts is complex. The Taylor Grazing Act provides for the "proper use" of private land and water; therefore, the range survey must portray the comprehensive land-use picture of the entire district. Only by the securing of necessary facts can the persons to whom

"preference shall be given in the issuance of grazing permits" be determined. Range surveys in New Mexico Grazing District No. 5 were completed in 1936, and by the spring of 1937, the compilation of field data was assembled.

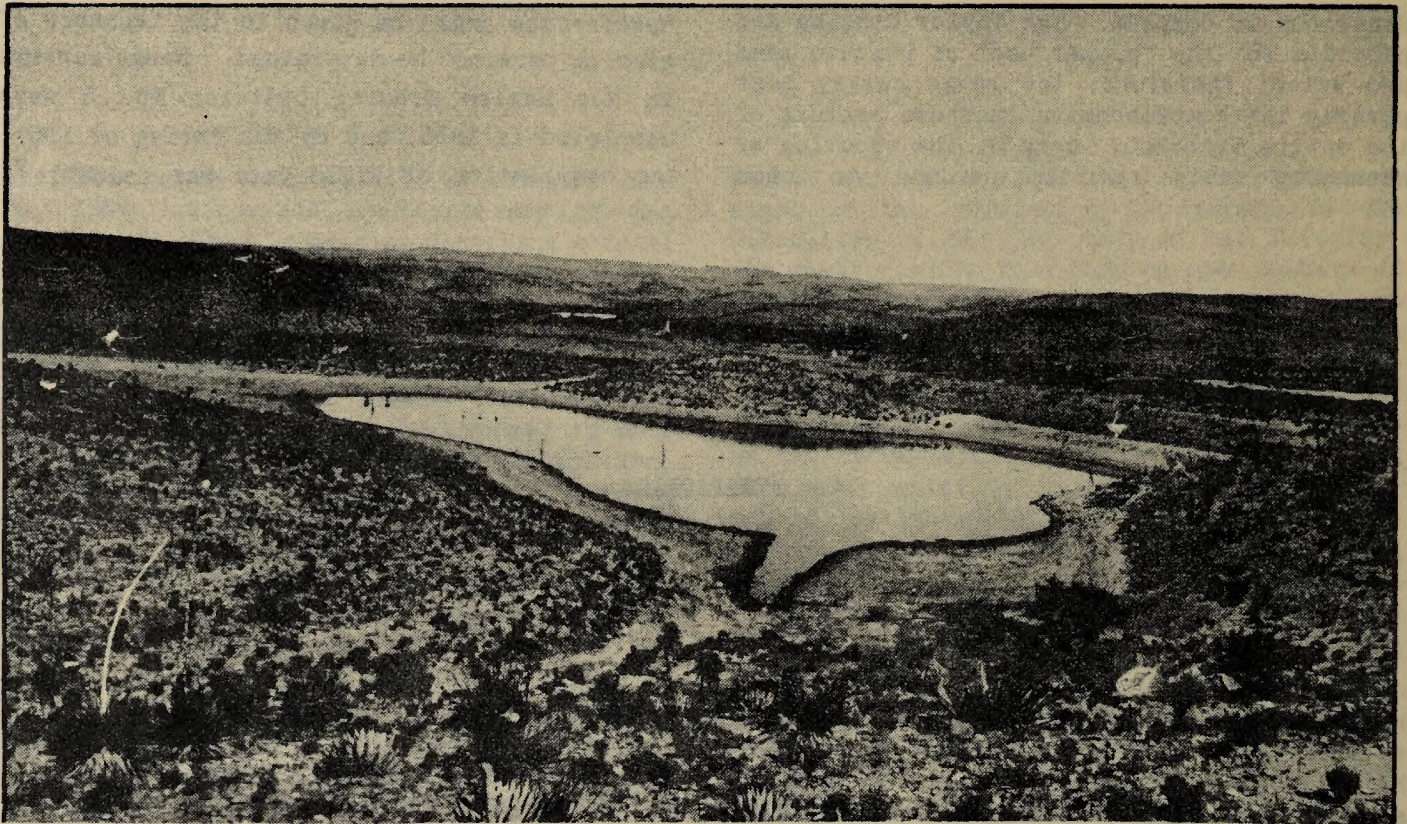
## NEW MEXICO GRAZING DISTRICT NO. 5

### Description

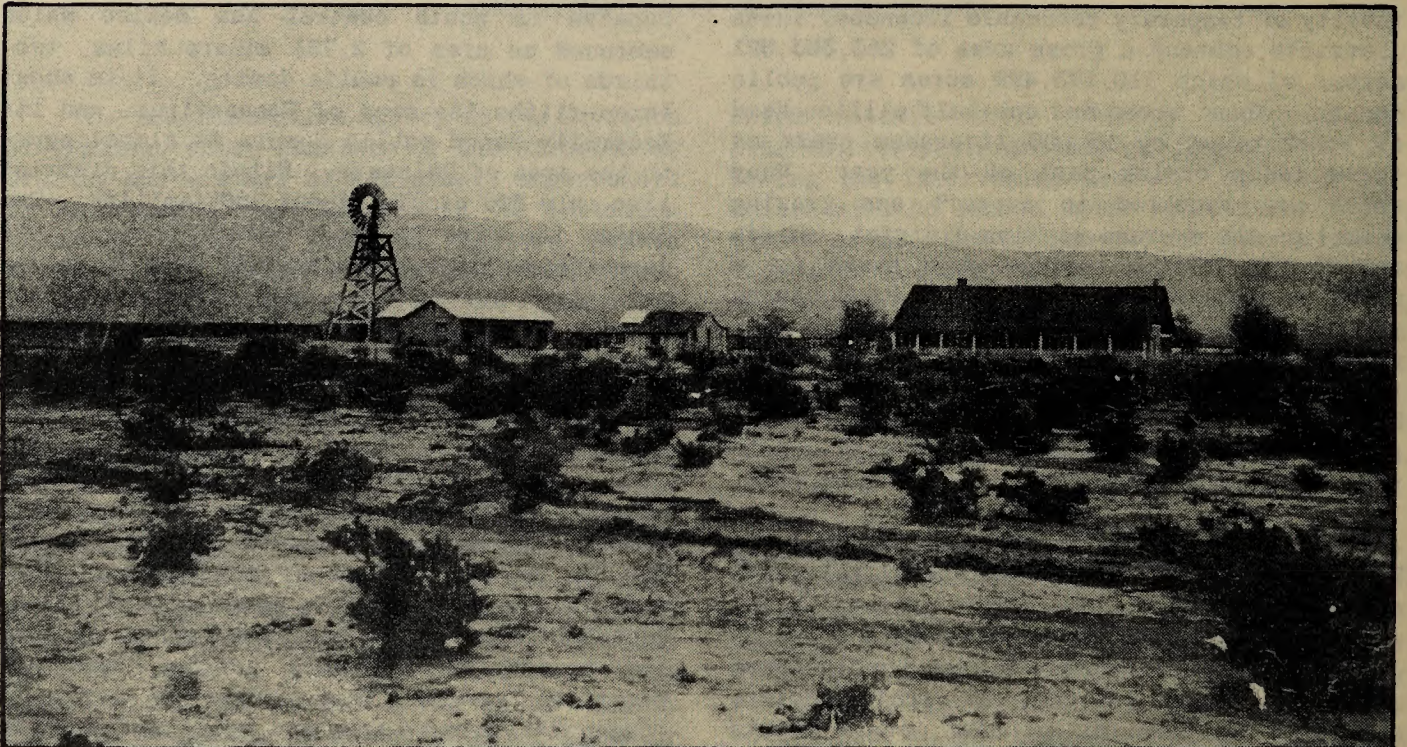
A grazing district is created after a notice is issued of a meeting and a hearing of objections, if any, is held within the area to be affected. Within two years after the passage of the Taylor Grazing Act, forty-nine grazing districts in Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, and Wyoming were established and rules and regulations promulgated defining the qualifications of those who were entitled to use of the public domain therein under authority of temporary revocable licenses. These districts embrace a gross area of 253,363,821 acres, of which 110,173,499 acres are public domain. About seven and one-half million head of stock owned by 15,000 licensees graze on these lands during part of the year. Many acres are required to support one grazing animal on the average grazing district. Herds and flocks "roving" on the open range was a practice born of necessity rather than choice in the early days, due to the sparse but nutritious vegetation, the scant rainfall, and the precious, widely scattered water holes. Grazing districts contain much of the breeding range which furnishes much of our meat supply that is finished for the block in the corn belt.

If you are traveling between the East and West on any of the trans-continental railroads or by automobile via one of the national highways, you will note that the centers of population in the public domain States are clustered along irrigated valleys, at trade centers served by the main mail routes, or at points near sources of forest and mineral products. On the vast arid stretches between towns, cattle and sheep are seen grazing. Here and there is a homesteader's cabin or sheepherder's tepee. As you stop for gasoline or as you ride in a Pullman car, you no doubt consult a map of these big United States. Focus your attention on a point where the thirty-second parallel of North latitude intersects the one hundred-sixth degree of West longitude. You are looking at the approximate center of New Mexico Grazing District No. 5.

This grazing district was established under authority of the Taylor Grazing Act on April 8, 1935. On its west side is the Southern Pacific Railroad operating between Santa Rosa, New Mexico, and El Paso, Texas. On its south is Texas, in which State the Government owns no land. At the east and north are the Guadalupe and Sacramento Mountains which are within the Lincoln National Forest. These natural and political features form the outside boundaries of this Taylor grazing district located in south central New Mexico which embraces an area of 2,731 square miles, two-thirds of which is public domain. It is about three-fifths the size of Connecticut, and its Federally owned public domain is almost equal to the area of Delaware. Within this district live only 300 people, about 100 families. Two States the size of Rhode Island could be set down inside its boundaries with room to spare, yet that little New England commonwealth houses a population two hundred and thirty times greater. Rhode Island's population averages 510 inhabitants to the square mile. The population of New Mexico Grazing District No. 5 averages one person to ten square miles. With its natural and political boundaries, however, this district is an economic unit that is practically "self-contained" in that for the normal conduct of its highest use--stockraising--it is with small exception independent of adjacent or distant areas. Within its boundaries there is neither town nor perennial stream. The surface is level to rough with broad mesas and rolling foothills leading to higher elevations of the Sacramento and Guadalupe Mountains. A wide strip of gentle sand hills follows the Southern Pacific Railroad right-of-way. Certain basaltic peaks and uplands in its southern part punctuate the otherwise rolling plain characteristic of that vicinity. Rocky canyons dissect the more rugged mountains. Emerging onto the plain, these canyons become shallow arroyos which terminate in broad lowland basins. The altitude ranges between about 4,000 and 7,000 feet above sea level.



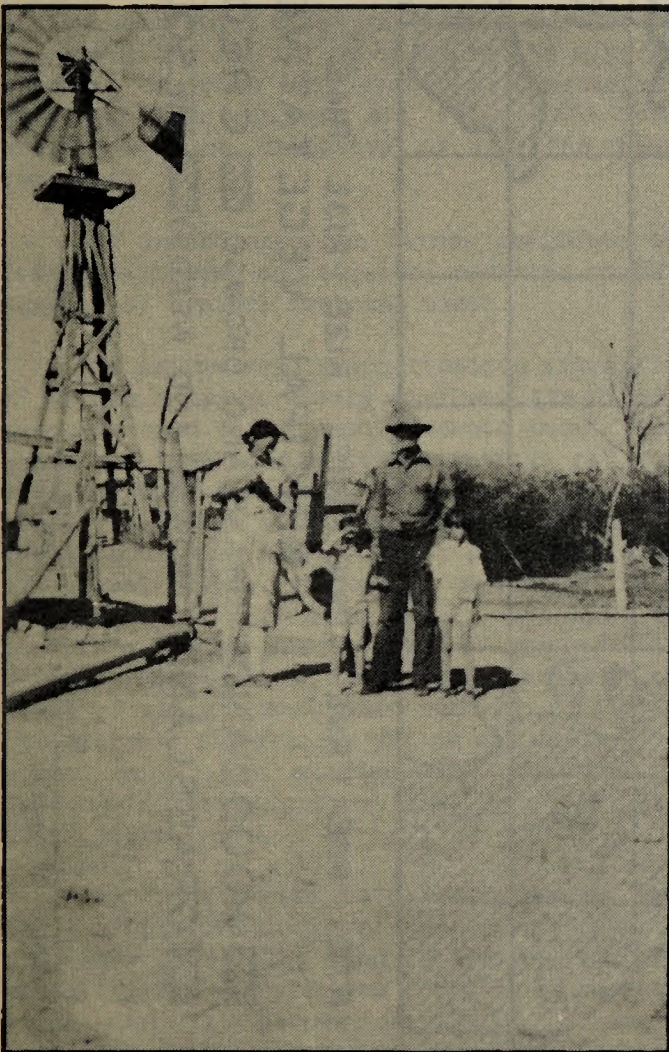
S. W. Lewis gravel tank looking northwest up Cornucopia draw.



An example of a ranch set-up showing the Guadalupe Ranch of Oliver M. Lee, Alamogordo, N. M. Mr. Lee is one of the first permanent settlers in New Mexico Grazing District No. 5 and is now chairman of the advisory board of that district. He was a pioneer in importing water for stock purposes by means of pipelines which tap the very source of small streams in the Sacramento mountains, and has seen stock raising progress through many stages, from the early days to the present Taylor Act administration.

## History

Contiguous to the railroad right-of-way is the Tularosa Basin in which are located the towns of Alamogordo and Tularosa, sites of early Spanish settlement founded on small mountain streams. Forty miles beyond is the fertile valley of the Rio Grande. Fifty miles eastward from the Guadalupe Mountains flows the Pecos River. The watered valleys of the Rio Grande and the Pecos greatly influenced early conquest and settlement in New Mexico. What is now Grazing District No. 5 stood unnoticed and uninviting because it was dry. Spanish Conquistadores traveling north along the Valley of the Rio Grande passed it by because it had the forbidding aspect of the unwatered desert. For the same reason the great herds of Chishom and others seeking fresh grass between Texas and the North in the 1860's considered it their western limit. The



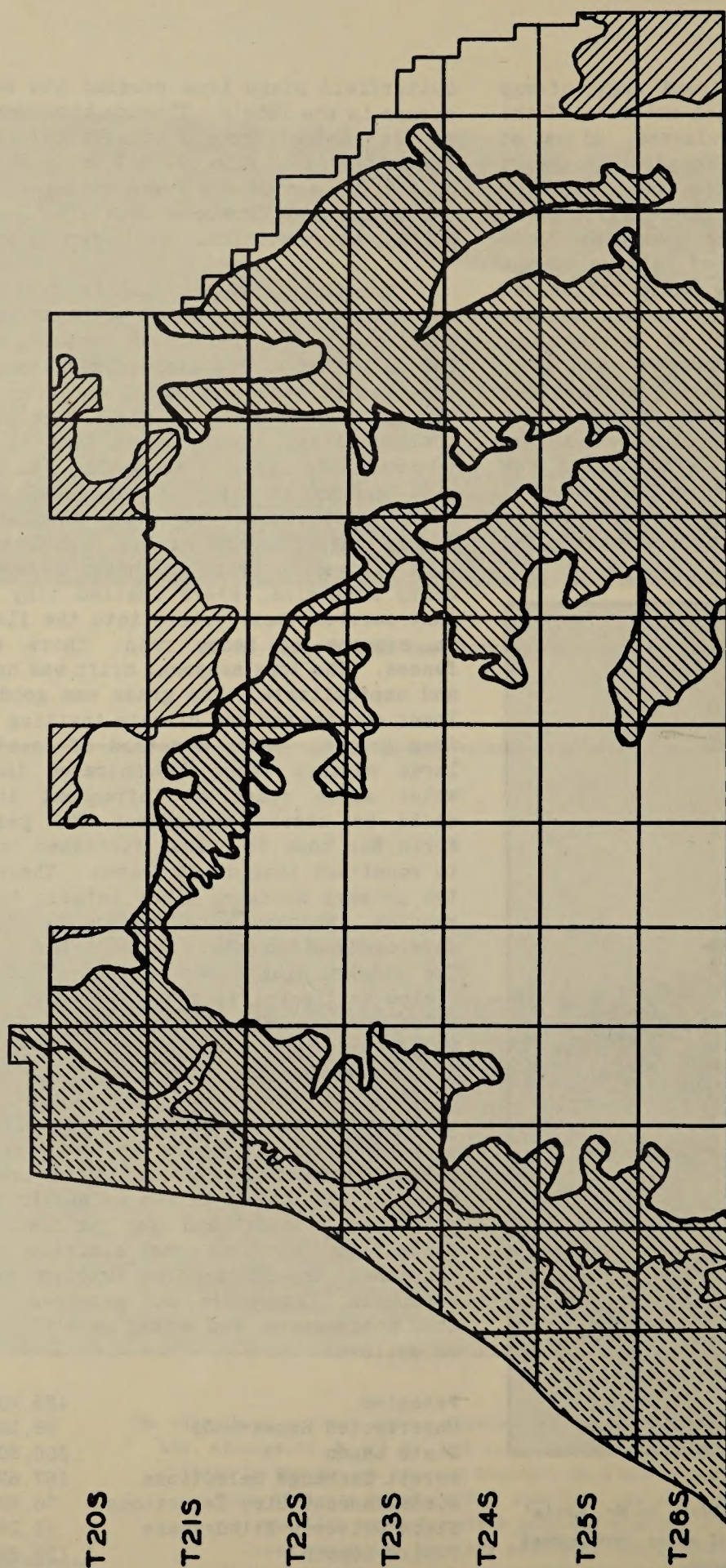
J. H. Lewis, wife, and grandchildren on Mr. Lewis' allotment. The windmill type of water development is used on his ranch.

Butterfield Stage Line crossed its southwest corner in the 1850's. Through here the country is flat and afforded a cut-off between Texas and California. This cut-off was made possible only after scouts had found spring water near the Alamo and Cormudas mountains where important stage stations were later established.

Actual settlement began in this district about 1885. Grazing lands adjacent to watering facilities in Texas were becoming crowded. The unclaimed richly grassed mesas across the line defied occupancy until moderate success was achieved by drilling shallow wells in the lowland flats. Meager earth dams were built to catch rain water on the mesas. An invasion into unoccupied territory had been made and the pioneer did not turn back when the transitory water supply failed, but his cattle were allowed to drift northward to the Sacramento Mountains, where nestled tiny streams that carried their waters into the flats only in seasons of heavy rain. There were no fences. The long seasonal drift was hazardous and unprofitable. The grass was good in the lower country and the climate inviting to year-long grazing. Soon a method of constructing large earthen tanks demonstrated that rain water which comes at infrequent intervals could be stored throughout the year. The World War boom in prices furnished the means to construct long drift fences. These became the primary division lines between the early ranches. Ranches were defined by the water developed and the public domain thus controlled. The stockraising homestead act of 1916 stimulated settlement within these large ranches. Selection was naturally more congested on the better land types. Elsewhere in the district, land selection has been guided by the possibility of development and distribution of stock water, and in the absence of such necessary improvements there is no clue as to public and private ownership. There is no apparent difference in the intrinsic value of public and private land over the district as a whole. At the time the district was established, the Division of Grazing found 166 occupants, landowners and settlers, most of them stockowners, and a land ownership pattern as follows:

Patented	123,290 Acres
Unperfected Homesteads	99,520 "
State Lands	300,500 "
Forest Exchange Selections	167,620 "
Miscellaneous Lieu Selections	76,884 "
Stock Driveway Withdrawals	11,260 "
Public Domain	1,110,926 "
TOTAL	1,890,000 Acres

# NEW MEXICO GRAZING DISTRICT NO. 5



R6E R7E R8E R9E R10E R11E R12E R13E R14E R15E R16E R17E R18E R19E R20E  
 PRINCIPAL VEGETATIVE TYPES  
 [diagonal lines] WOODLAND  
 [cross-hatch] GRASS AND BROWSE  
 [stippled] CREOSOTE (BROWSE, GRASS, AND WEEDS)  
 [horizontal lines] GRASSLAND (BROWSE AND WEEDS)  
 [horizontal lines] MESQUITE SANDHILLS (GRASS AND WEEDS)

0 6 12  
 SCALE OF MILES

DIVISION OF GRAZING  
 ALBUQUERQUE C.C.C. DRAFTING OFFICE  
 JAMES HARRIS - ENROLLEE DRAFTSMAN  
 AUGUST 16 1937

### Climate, Physiography, Vegetation

The climate is arid. The amount of rainfall received over the district as a whole ranges between about eight and fourteen inches annually. Variation in amount of precipitation generally conforms to the influence of altitude. The bulk of seasonal rainfall which is usually of torrential nature is received during the late summer. These summer storms convert the otherwise dry washes into raging torrents. Following such storms the flat lowlands are covered with water which is later dissipated through normal processes of seepage and evaporation. Such areas are locally termed "overflows" or "spreads" which produce abundant forage on the better soils. With few exceptions, there is no cultivated land in the district. On promiscuous small spreads, occasional crops of the sorghum variety, native hay and alfalfa are produced. Stock water supplies stored in large earthen tanks are replenished from these summer rains. No industry other than stock raising is pursued in the district. So far as is known, no mineral deposits of value have ever been discovered. Three or four wildcat oil wells have been drilled but no discovery of oil has been reported.

The inhabitants are former residents of Texas, Oklahoma, and adjacent counties of New Mexico, of typical American stock.

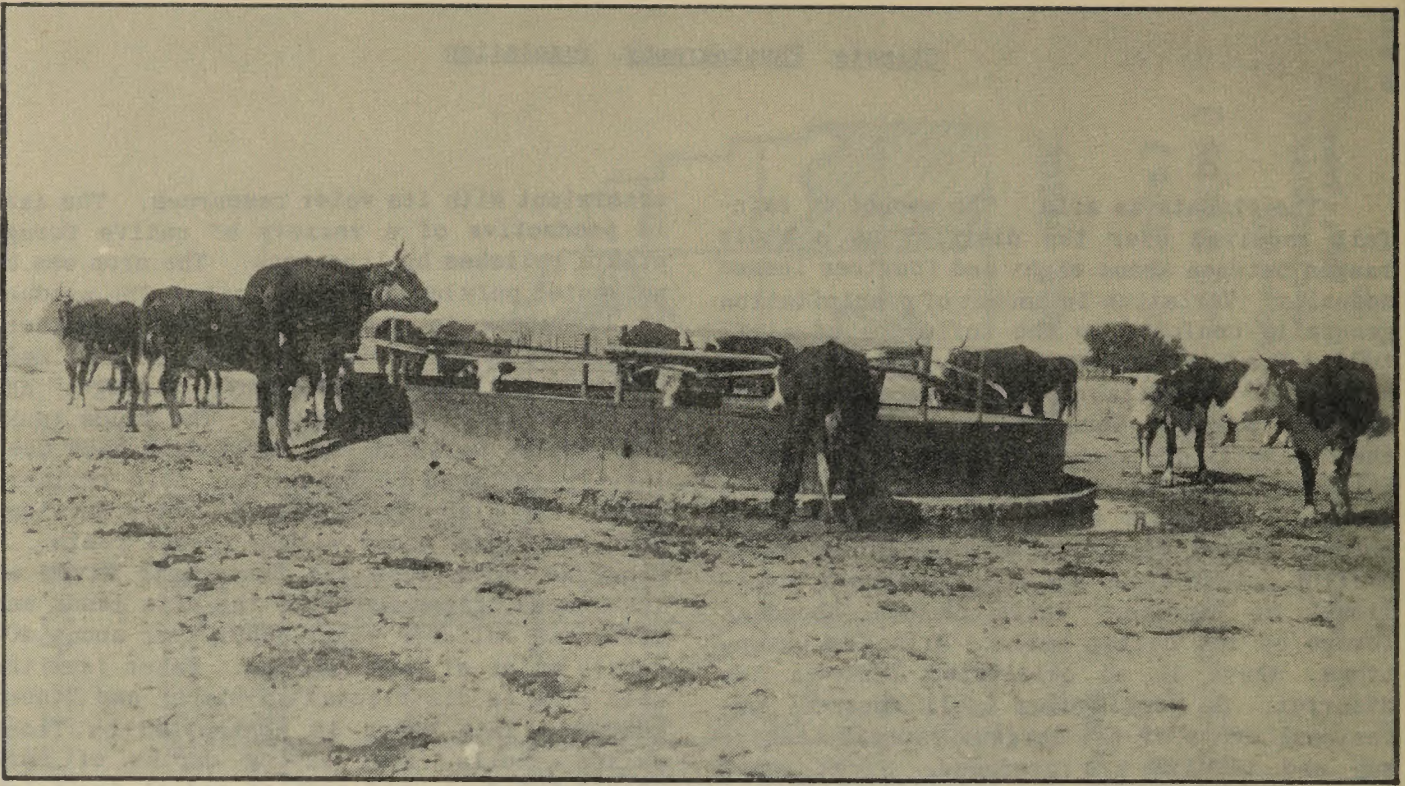
The native vegetation consists primarily of four main types, namely woodland, grassland, mesquite sand hills, and creosote bush. The grassland type is the most extensive and the woodland type the most productive per unit of land. The value of the mesquite and creosote types is largely dependent on an undergrowth of annual weeds. Carrying capacities are reckoned on a year long basis. The unit of land is a section and the unit of livestock is a cow. The climate, soil, and variety of plant growth are such that some type of feed is available for grazing during any month of a normal year. The abundance or scarcity of feed is directly proportional to "wet" and "dry" years.

Any arid region will have reached the limit of its productivity when it has reached its water line. The land in Los Angeles and vicinity, for example, was found to be of such value that its people considered it sound policy to import water from sources 300 miles away at a tremendous cost. As a result of that project, population and values more than doubled in a decade.

New Mexico Grazing District No. 5 exemplifies occupancy on the western range that is

consistent with its water resources. The land is productive of a variety of native forage plants relished by livestock. The crop can be harvested only by grazing animals. The product is livestock in the form of meat, leather, wool, and mohair. Use of the land is made possible by the development, storage, and distribution of stock water. The crude tanks and shallow wells of the early days have been largely replaced by better and more reliable types. An elaborate scheme of water development has taken place within recent years. A pipeline which taps the Sacramento River at its source brings water to the Mesa lands and affords a reliable water supply for about 400 square miles of grazing land. Water from the main line is distributed to "taps" and "tubs" the flow into which is controlled by float valves. Wells, some having depths of more than 1,000 feet, and some of modest depth tap underground supplies. Deep wells are equipped with engines and shallow wells with windmills. From them water is delivered into metal, concrete, or earthen tanks with capacities for storage up to 100,000 gallons. From these sources pipelines may lead to "tubs" or smaller tanks strategically located in distant pastures. Large earthen tanks are constructed on good sites where the drainage for run-off is good, the danger from flood damage is slight, and the soil capable of holding water without excessive seepage. Some of these tanks have storage capacities of 50 acre feet or more. These are regarded as "reliable waters." Reliable waters are as a rule supported by smaller tanks where the size of the outfit justifies, and these are regarded as "supplemental" waters. "Supplemental" waters augment the more expensive reliable waters and afford wider and better range use. They allow for a system of pasture rotation which is good range practice. On the whole stockwatering facilities are ample for existing needs.

The Taylor Grazing Act lends itself perfectly to administration on this type of set-up. Operations are largely in place within fenced enclosures which consolidate the use of public and private land. Although there is a tendency by some to overstock the range, the majority have learned the value of conservation through bitter experience. Some, however, have abused the range country contrary to their good judgment. Grass unused is a keen temptation to others who are short of grass and without regulation. The conservative operator was helpless to protect from invasion by others the range he had wisely preserved. The Taylor Act offers them hope and through it conservation, rehabilitation, stability, and proper use of land and water will be afforded.



Cattle drinking at a pipeline tub at Mesa Horse camp. These tubs are placed at desired locations within large pastures and are fed from pipelines that convey water from distant sources. These sources may be deep wells, storage tanks or main lines from mountain sources. The flow into the tubs is controlled by float valves so that no water is wasted.



Yucca in bloom on the McGregor allotment. The region in which New Mexico Grazing District No. 5 is located is subject to periodical drought of severe duration. At such times the grasses and weeds make no growth, and starvation is often prevented by the native yucca species. Occasionally the bloom and root of the Yucca furnish the principal sustenance for livestock during the drought. It is much sought after by livestock.

## Wildlife

The act does not restrict or alter in any way the right to hunt or fish within a grazing district in accordance with the laws of the United States or of any State. Nor does it vest in any permittee any right to interfere with hunting or fishing within a grazing district.

The Land Use Committee of the New Mexico State Planning Board and the Department of Game and Fish of New Mexico, desired coordination in the use of grazing districts consistent with the needs of domestic livestock and game. Wildlife and recreation are part of the great resources of the State, and by active interest and cooperation the Department of Game and Fish is represented on each of the advisory boards of New Mexico grazing districts under the provisions of Circular No. 3, approved August 21, 1935. This circular amply provides for the present and future interests of wildlife within grazing districts in New Mexico. The plan is based upon the principle that wildlife is entitled to share in the use of all the range jointly with livestock to a reasonable extent. Game refuges necessary for adequate protection and restocking of game animals and game birds may be established within any grazing district, the location and size of such refuges to be determined so far as possible in cooperation with grazing district permittees. Under these provisions there have been established two small refuges within widely scattered ranches in New Mexico Grazing District No. 5. These refuges do not provide for the exclusion of grazing but merely the prohibition of all hunting. The Department of Game and Fish has estimated that 75 percent of the district is suitable to blue quail and capable of supporting these semi-desert game birds without interfering with grazing. Antelope may be considered the principal game mammals to be produced in this district, and it is estimated that approximately 600 now inhabit the area, principally on the open grasslands. About half of the district area is of a type suitable to antelope. The objective of the Department of Game and Fish is to produce and perpetuate a herd of not to exceed 3,000 antelope. Probably not more than three or four widely scattered townships in the district are suitable to deer. The Department of Game and Fish estimates that about 700 head now inhabit the area, and the objective is to perpetuate a herd of deer not to exceed 1,500. A few mountain sheep are known to exist in the rugged breaks of the Guadalupe Mountains. The Department of Game and Fish expects the desired number of deer

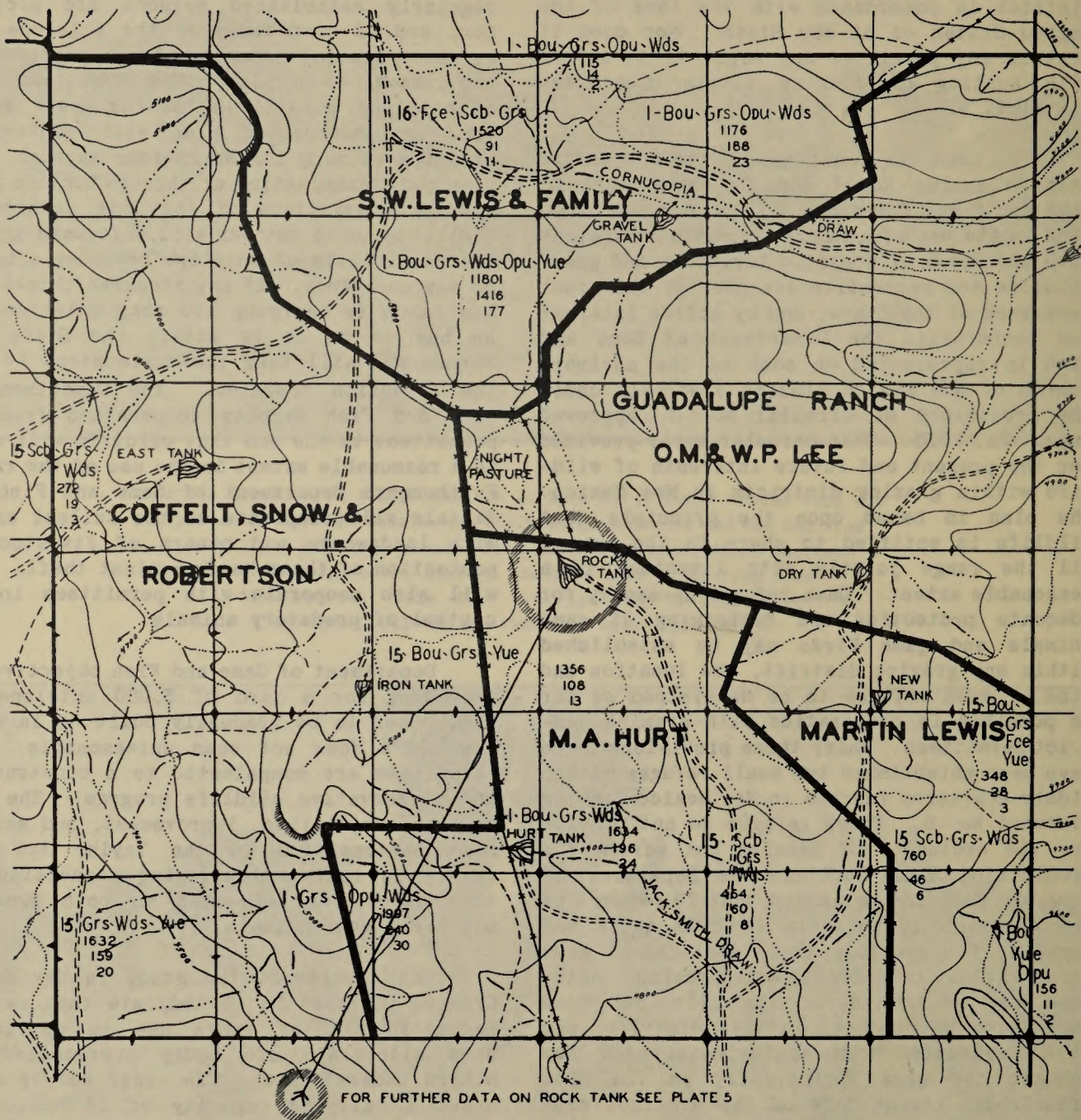
and antelope to be attained in about ten years. Bird hunting and deer hunting during regularly established seasons are provided for, and if conditions of the antelope herd warrant, special seasons will be provided for the removal of surplus. Should concentration of antelope on limited favored areas occur, the game management plan will contemplate breaking up such concentrations through trapping and transplanting or through hunting under special regulations of the Game Commission. Control by these methods will safeguard against the possibility of antelope becoming a burden on any one ranch. If any stockman thinks that his ranch is carrying too many antelope, all he has to do is to notify the State Game Warden who will take immediate steps to have the situation remedied. The Department of Game and Fish expects cooperation from the permittees to the end that wildlife will share to a reasonable extent in the use of the range. Furthermore Department of Game and Fish officials will cooperate to the fullest extent with landowners and owners of livestock in protection of their herds against theft. They will also cooperate with permittees in the control of predatory animals.

Department of Game and Fish objectives in providing for a herd of 3,000 antelope and 1,500 deer to be gradually built up in about ten years does not seem unreasonable. The permittees are sympathetic to a constructive and conservative wildlife program. The protection, regulation, improvement, and management contemplated in the Taylor Act will result in increased carrying capacities and thus allow for increases in both domestic stock and game animals.

The results of the study in New Mexico Grazing District No. 5 indicate that certain redistribution of range use is necessary. Some allotments are badly overstocked and others understocked. The range survey study shows a carrying capacity of 24,929 cattle yearlong, while the record of licenses issued in 1937 shows it is used by 16,039 cattle, 1,429 horses, 26,025 sheep, and 5,546 goats, which is equivalent to 23,783 cattle yearlong. Game experts tell us that a deer or antelope requires one-fourth the amount of feed a cow requires. Assuming a present herd of 1,300 deer and antelope grazing in the district and that four of these game animals can be supported on the feed required by one cow, the feed taken by them is an amount equal to that which would be required to support an additional 325 cattle yearlong.

# TOPOGRAPHIC, GRAZING TYPE AND ADMINISTRATIVE MAP

T23S-R16E NEW MEXICO GRAZING DISTRICT NO. 5



LEGEND ACCORDING TO THE DIVISION OF GRAZING RANGE SURVEY HANDBOOK - 1936

## TOPOGRAPHY AND CULTURE

100 FT. CONTOURS  
 DRY WASH  
 CLIFFS  
 COUNTRY ROADS  
 RANCHES AND HOMES  
 FENCE  
 BOUNDARY FENCE  
 EARTH TANK  
 SURVEY CORNER FOUND

## GRAZING DATA

TYPE DESIGNATION - 1-GRS-BRS-WDS  
 TYPE - 1 GRASSLAND  
 TYPE - 16 DESERT SHRUB  
 TYPE - 11 CREOSOTE  
 TYPE LINES  
 SUBTYPE LINES  
 SURFACE ACRES - 23,231  
 FORAGE ACRES - 2,576  
 CARRYING CAPACITY - 322 CATTLE YEAR LONG

## VEGETATION SYMBOLS

Bou. -- GRAMA GRASSES  
 Sch. -- BURRO GRASS (SCLEROPOGON BREVIFOLIUS)  
 Grs. -- MIXED GRASSES  
 Wds. -- MIXED WEEDS (FORBS)  
 Fce. -- TAR BUSH (FLOURENSIA CERNUA)  
 Yue. -- YUCCA (YUCCA ELATA)  
 Opu. -- CACTI

0 1/2 1 2

SCALE OF MILES

ALBUQUERQUE C.C.C. DRAFTING OFFICE  
 JUNE 18 1937

VERNON W. CROWE ENROLLEE DRAFTSMAN

PLATE 4

### Analysis of Maps

Plate 3, the 1937 allotment and water map for New Mexico Grazing District No. 5, shows the allotment boundaries within which are the name of the allottee and the respective area controlled therein, together with the location, type, and classification of water development. Most of the allotments are fenced and have been so for many years. For the most part allotment boundary lines have existed under mutual agreement among all interested parties and are as the Division of Grazing found them on April 8, 1935.

As in all things some inequalities existed, and the minor adjustments needed were accomplished through agreements between all parties concerned. Adjudication of range privileges is based on stock water which the Taylor Grazing Act recognizes as dependent property when it is so located that public range is necessary to permit its proper use. This is ascertained from the relative location of the water and the public range, and the accessibility of each to the other. The commensurable value of stock water for range privileges is expressed in terms of the number of livestock it will carry and is determined by:

1. The amount or volume of water available and its adequacy for the number of livestock during the season of use.
2. Area of public and private property beneficially serviced by such water as limited by:
  - a. Relative location of other waters
  - b. Natural and artificial barriers
  - c. Topography, surface, and climatic conditions
3. The character and amount of vegetation on the area serviced

Plate 4 illustrates the method of determining preferences based on water and reciprocal division line agreements of long standing.

Plate 5 shows the method of determining the area serviced by an individual water as limited to artificial barriers, the character and location of competing waters, and the carrying capacity of the area upon which the water has been rated for a preference.

### Administrative Action of May 10, 1937

The following is a summary of administrative action of May 10, 1937:

Licenses issued 61

Allotments defined and agreed 58

Livestock licensed:

Cattle	16,039
Horses	1,429
Sheep	26,025
Goats	5,546

Total animal units 23,783

(1 cow, 1 horse, 5 sheep or goats equals 1 animal unit)

The following is a tabulated summary of range survey data:

1. Area	Square miles
a. Public domain	1,953
b. Owned and leased by allottees	590
c. Not controlled by allottees	188
Total	2,731

2. Carrying capacity cattle yearlong 24,929

3. Average carrying capacity per section cattle yearlong 9

4. Water

a. Reliable

1. Wells	53
2. Tanks	59
3. Taps	31

Total 143

Area serviced (sq.mi.) 1,786½

b. Supplemental

1. Tanks	179
2. Springs	1
3. Taps	1

Total 181

Area serviced (sq.mi.) 738½

Total waters 324

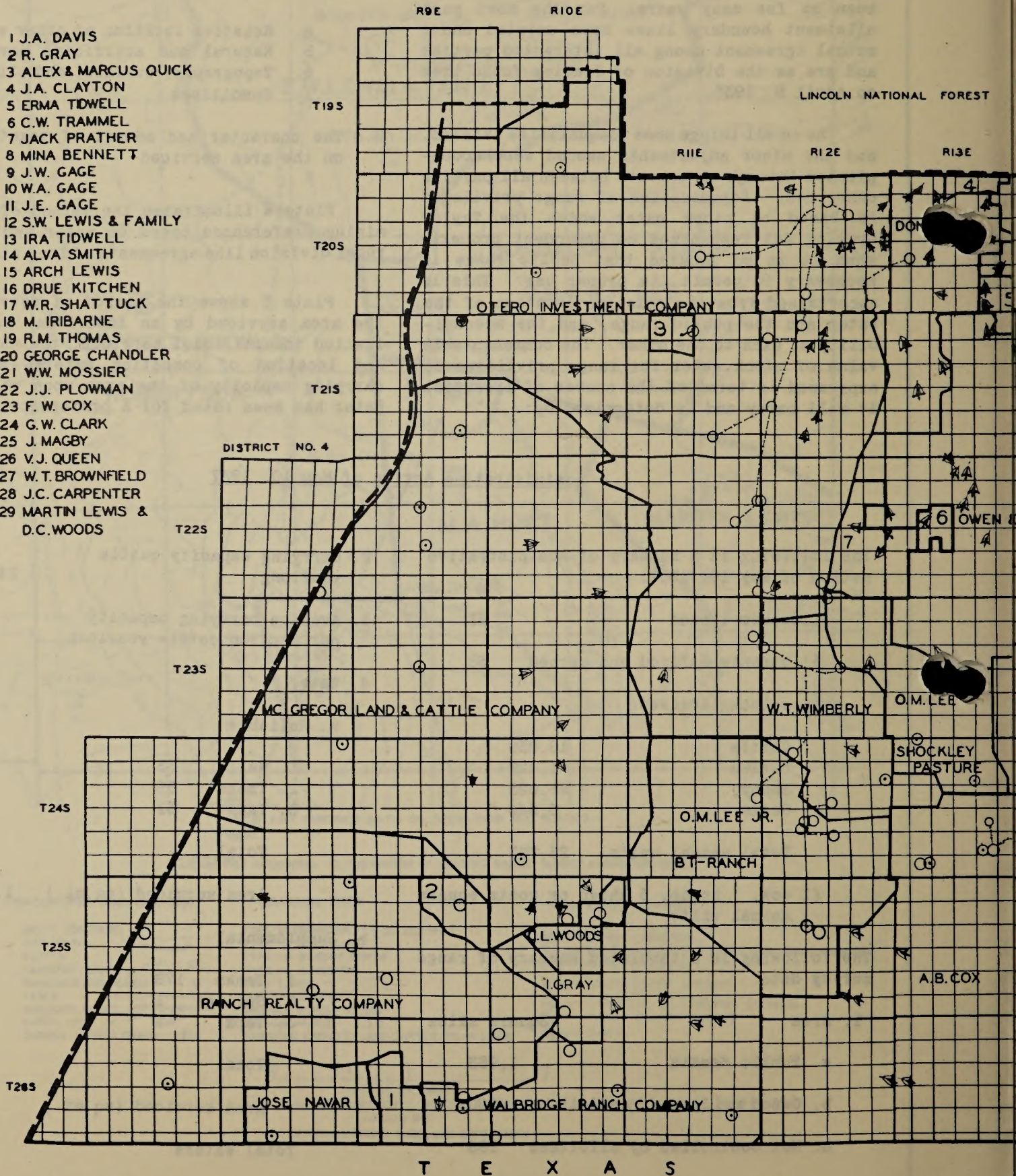
Total area serviced (sq.mi.) 2,525

# UNITED STATES DEPARTMENT OF THE INTERIOR

## 1937 ALLOTMENT AND WATER MAP—N

SHOWING ALLOTMENT BOUNDARIES—N

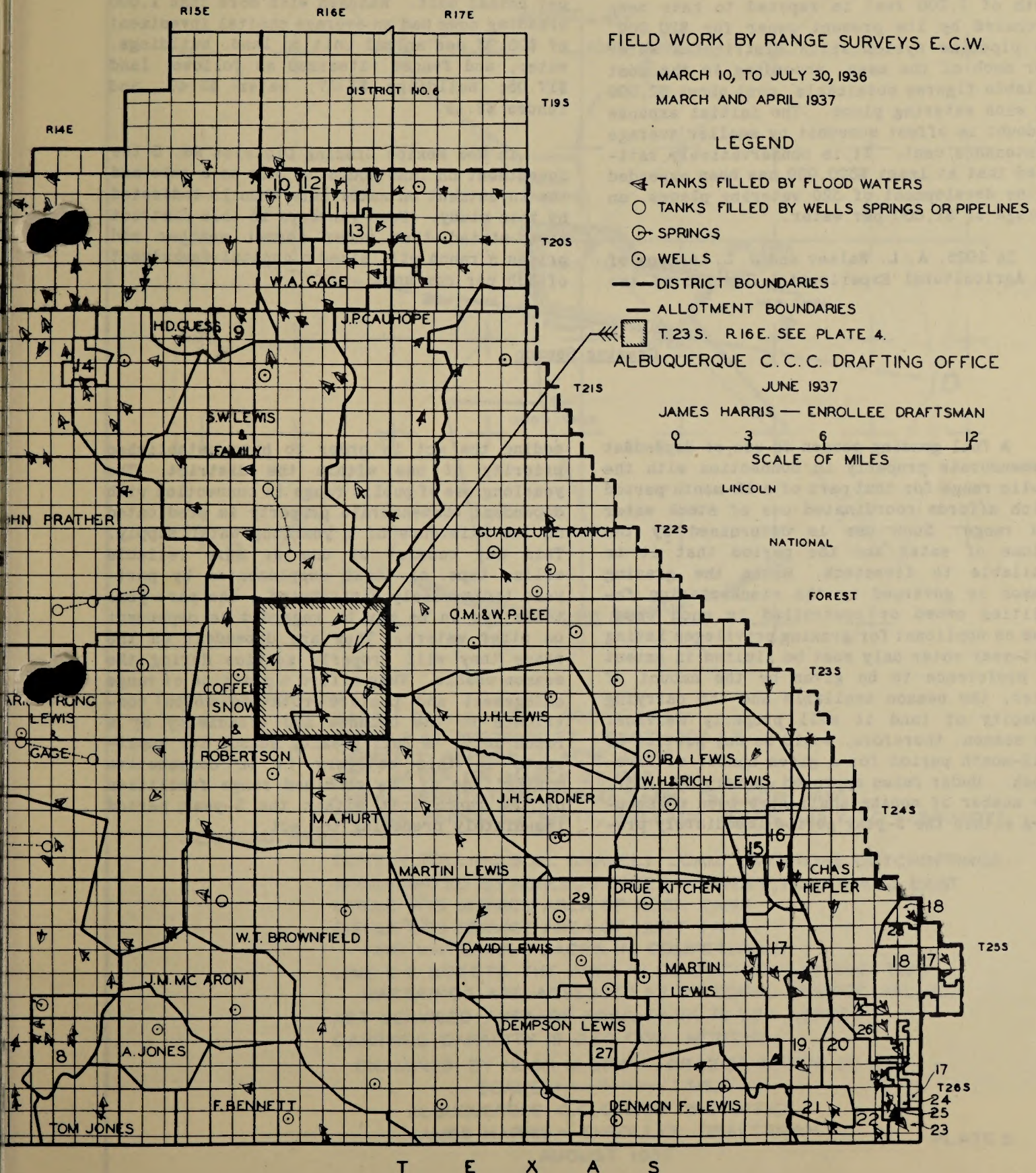
- 1 J.A. DAVIS
- 2 R. GRAY
- 3 ALEX & MARCUS QUICK
- 4 J.A. CLAYTON
- 5 ERMA TIDWELL
- 6 C.W. TRAMMEL
- 7 JACK PRATHER
- 8 MINA BENNETT
- 9 J.W. GAGE
- 10 W.A. GAGE
- 11 J.E. GAGE
- 12 S.W. LEWIS & FAMILY
- 13 IRA TIDWELL
- 14 ALVA SMITH
- 15 ARCH LEWIS
- 16 DRUE KITCHEN
- 17 W.R. SHATTUCK
- 18 M. IRIBARNE
- 19 R.M. THOMAS
- 20 GEORGE CHANDLER
- 21 W.W. MOSSIER
- 22 J.J. PLOWMAN
- 23 F.W. COX
- 24 G.W. CLARK
- 25 J. MAGBY
- 26 V.J. QUEEN
- 27 W.T. BROWNFIELD
- 28 J.C. CARPENTER
- 29 MARTIN LEWIS & D.C. WOODS



# DIVISION OF GRAZING

## NEW MEXICO GRAZING DISTRICT NUMBER 5

NAME OF ALLOTTEE AND TYPE OF WATER



### Cost of Water Development

The cost of water development ranges from about \$200 for a small part-year tank to \$10,000 or more for a deep well. The type, size, quantity, topography, formation, location, cost of feed for work animals during construction, and many other factors must be taken into consideration. One well with a depth of 1,200 feet is reputed to have been purchased by its present owner for \$20,000. The pipeline system which distributes water over much of the mesa, according to the most reliable figures obtainable, cost about \$2,000 for each watering place. The initial expense no doubt is offset somewhat by smaller average maintenance cost. It is conservatively estimated that at least \$320,000 has been expended on the development of 320 watering places, an average of \$1,000 per water.

In 1925, A. L. Walker and J. L. Lantrow of the Agricultural Experimental Station of the

New Mexico State Agricultural College, conducted a study, Bulletin No. 159, "A Preliminary Study of 127 New Mexico Ranches," which showed that on ranches with an average size of 85 sections in the central and southern part of the State the investment in waters averaged \$103 per section of land, or \$5.06 per animal unit. Ranches with more than 1,000 breeding cows had an average capital investment of \$25.93 per animal unit on land, buildings, water, and fences, itemized as follows: land \$17.05; buildings \$3.37; water \$3.40; and fences \$2.11.

In New Mexico Grazing District No. 5 the investment on land would be less as a rule and the investment on water more than is indicated by this study. Some ranchers in this district have stated that under normal weather and prices a ranch will stand a capital investment of \$35 per cow unit.

### Grazing Season

A full grazing season is use of dependent commensurate property in connection with the public range for that part of a 12-month period which affords coordinated use of stock water and range. Such use is determined by the volume of water and the period that it is available to livestock. Hence the grazing season is governed by the stockwatering facilities owned or controlled in each case. Thus an applicant for grazing privileges having part-year water only must be limited in extent of preference to be given by the amount of water, the season available and the carrying capacity of land it will properly service. The season, therefore, would be any portion of a 12-month period for a given number of livestock. Under rules approved January 28, 1937, the number of months shall have been consecutive within the 5-year period immediately pre-

ceding the act in order to have established priority of use within the district. The yearlong use of public range in connection with dependent commensurate property is predicated on the existence of a yearlong water supply. This may consist of one or more reliable wells, taps, or tanks supplemented by part-year tanks wisely distributed. The part-year tanks can in no way be regarded as dependent on other waters. They are dependent on the range they will properly service during the season usable. They afford a practice of range management and pasture rotation which contribute to the balance and efficiency of a ranch unit. A full grazing season for applicants in this category is 12 consecutive months' use of the combined range facilities of the ranch unit within the 5-year period immediately preceding the act.

(LOCATED NW1/4 NW1/4, S 22, T 23 S. R 16E)

A hand-drawn map on a grid background showing a water service limit. The map features a central shaded area labeled "NIGHT PASTURE" and "COMPETING WATER". Surrounding this area are several tanks: "EAST TANK", "GRAVEL TANK", "IRON TANK", "ROCK TANK", "HURT TANK", "NEW TANK", and "DRY TANK". A dashed line labeled "SERVICE LIMIT" and "ASSUMED SERVICE LIMIT OF WATER IN N.M.G.D.S." encloses the central area. A solid line labeled "AGREED FENCE" is also shown. The map is marked with a grid of plus signs and a dashed circle. Points A, B, C, and D are labeled on the grid.

EARTH DAM ACROSS ROCKY DRAW.  
DEPTH 9 FT. WIDTH 60 FT. LENGTH 300 FT.  
CAPACITY APPROX 3 ACRE FEET.  
6 FT. WATER ON MARCH 27, 1937.  
LOCAL REPUTATION: "GOOD TANK", "SELDOM DRY"  
SERVICE PERIOD ESTIMATE, AVERAGE YEARS, "JULY TO FEBRUARY."

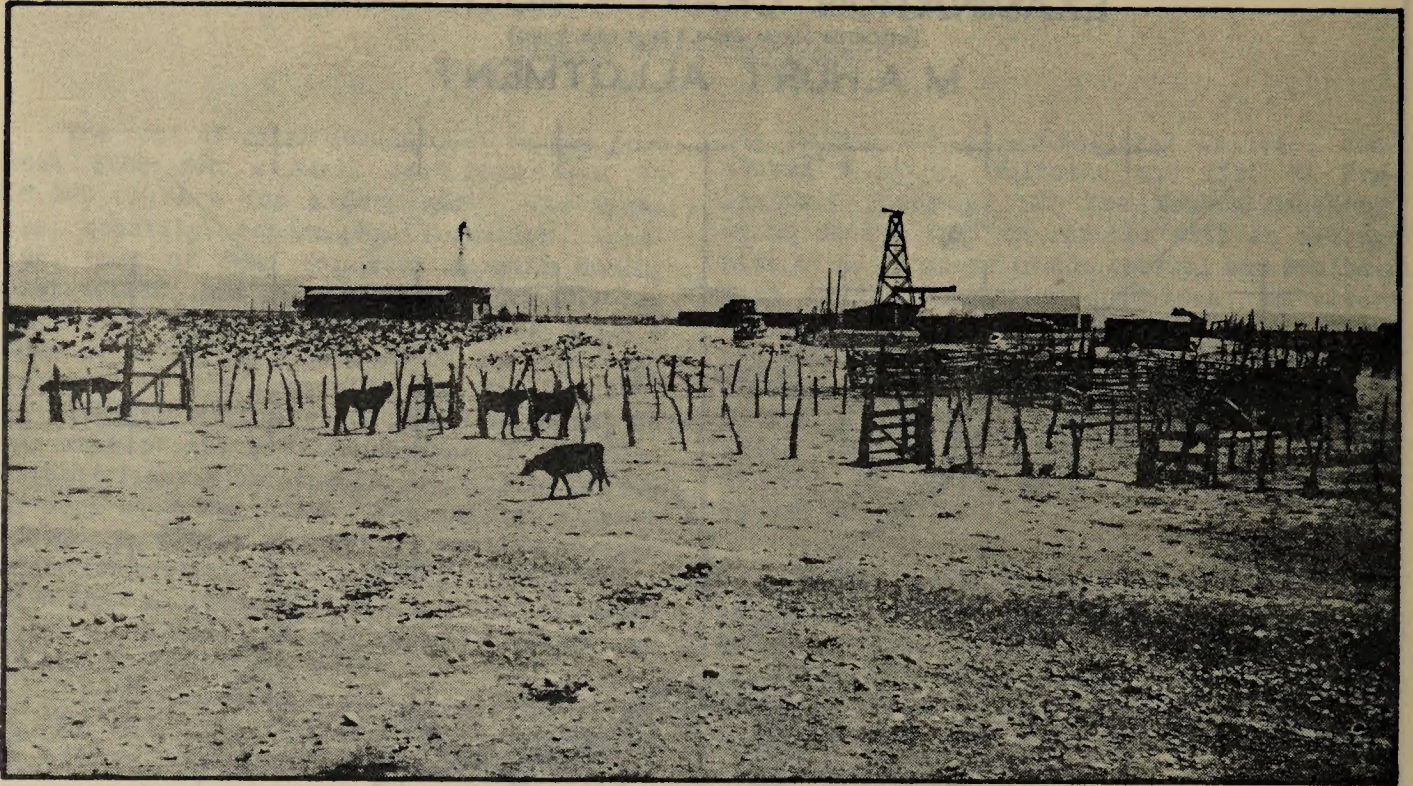
GENTLY ROLLING. SOIL: GRAVELY LOAM LIMESTONE OUTCROPPINGS.  
AREA LIMITED BY AGREED FENCES ON WEST, NORTH, AND EAST.  
CIRCLE "A" IS SERVICE AREA OF ROCK TANK.  
CIRCLE "B" IS SERVICE AREA OF HURT TANK.  
TWO WATERING PLACES IN COMPETITION.  
LINE C-D BISECTS THE AREA IN COMPETITION AS THE TWO  
WATERINGS ARE ASSESSED AS OF EQUAL SERVICE VALUE.  
NET SERVICED AREA OF ROCK TANK IS 920 ACRES.  
CARRYING CAPACITY IS 240 COW MONTHS.

EXAMINED BY HUGH M. BRYAN, GRAZIER MARCH 27, 1937

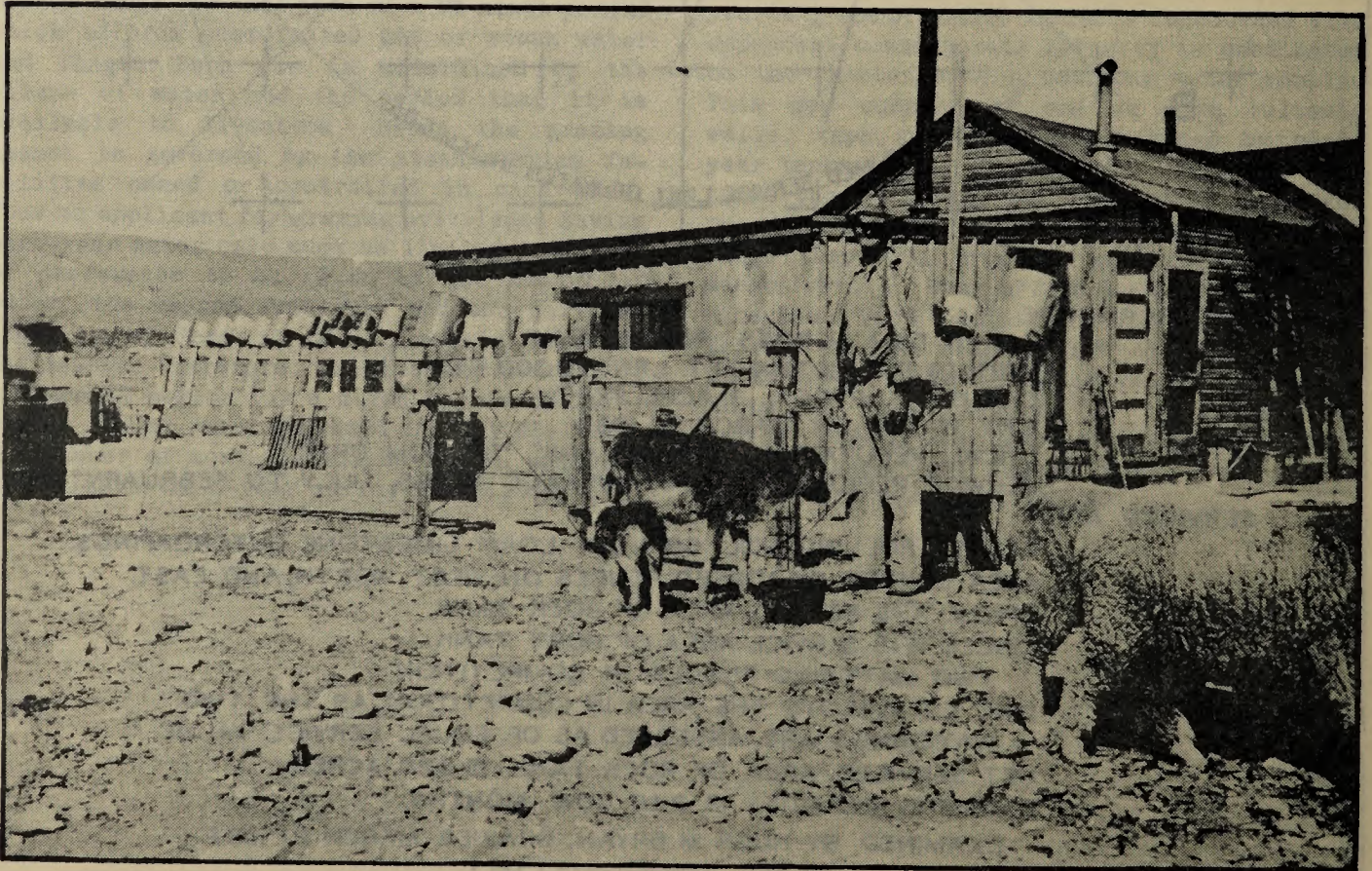
SCALE  = 1 MILE

ALBUQUERQUE C.C.C. DRAFTING OFFICE  
JAMES HARRIS — ENROLLEE DRAFTSMAN  
AUGUST 1937

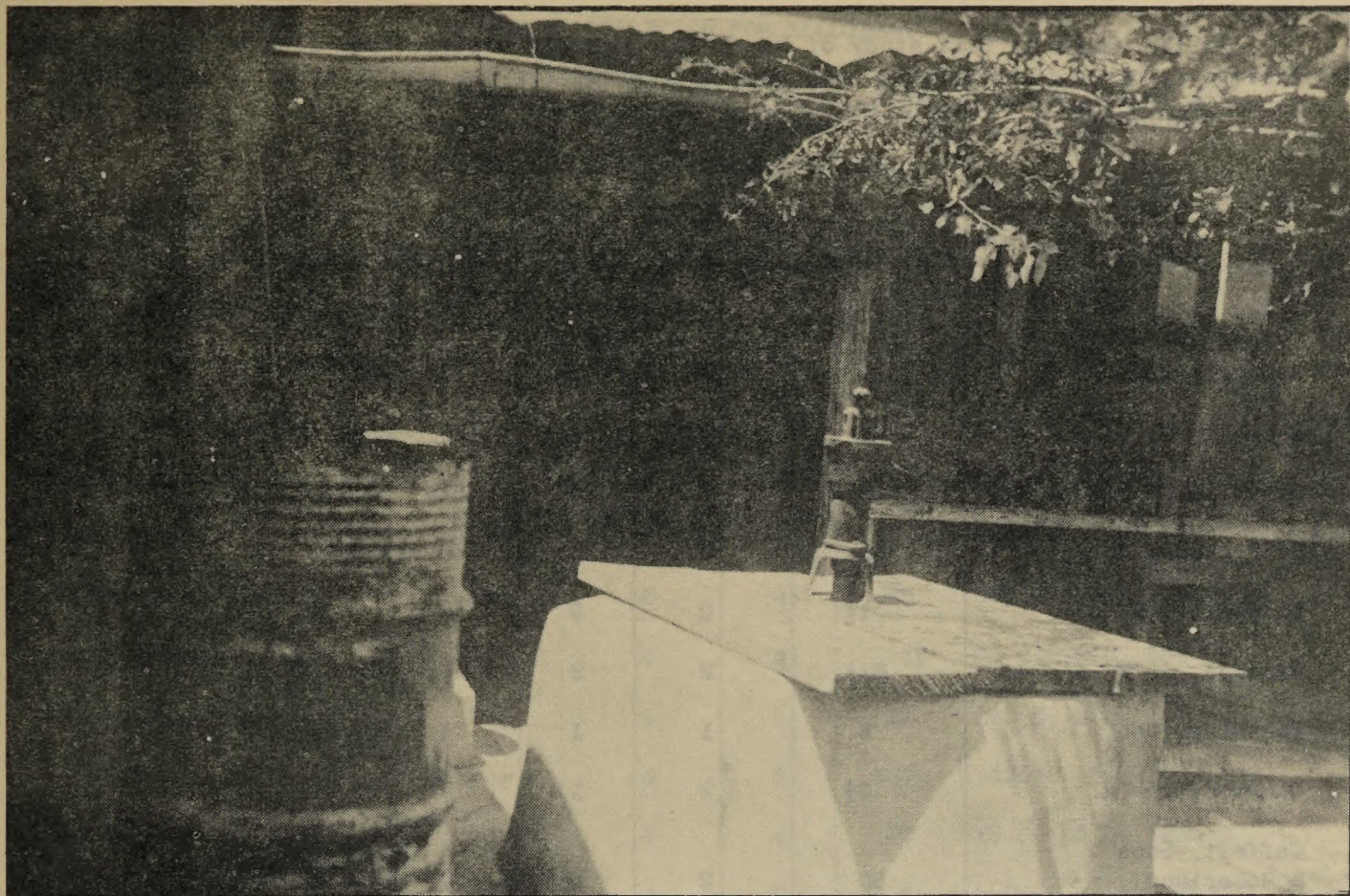
15



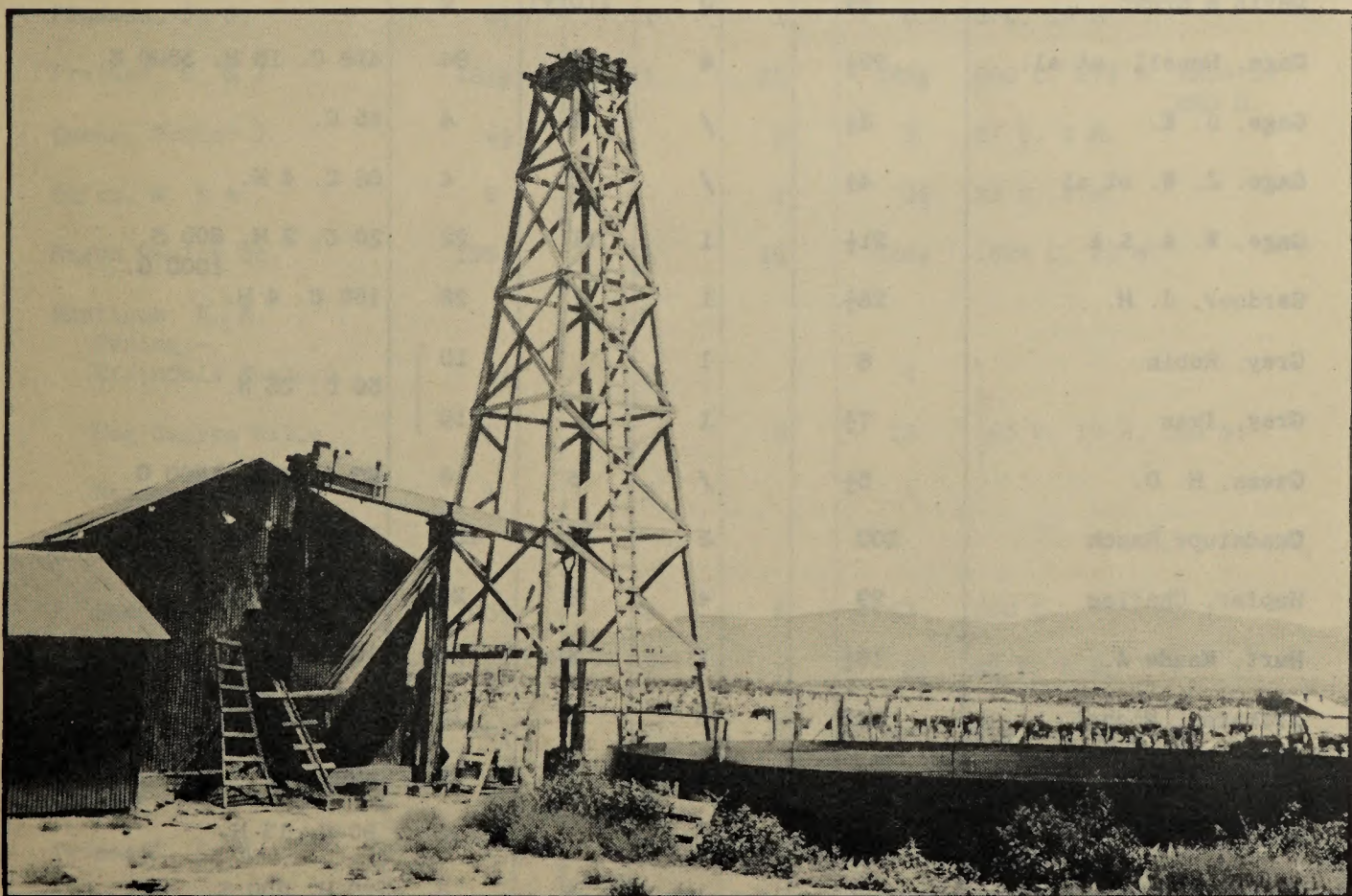
John Prather well, house, and corrals, another example of a ranch set-up. The domestic water is pumped from a tank one eighth of a mile west, into small storage tanks, indicated by windmills.



An example of a small ranch set-up belonging to D. C. Woods. Mr. Woods settled in New Mexico 18 years ago and has built up a year-long water supply in the face of great handicaps.



Pump, filter, and troughs for domestic water at the BT Ranch of  
O. M. Lee, Jr.



S. W. Lewis well. This is an illustration of a deep well equipped  
with a "walking beam" pump, a home-made device which makes  
it possible to lift water from great depths by  
using a comparatively small engine.

On the basis of this study of New Mexico Grazing District No. 5 which included all factors involved, preferences have been determined for the adjudication of range privileges in conformity with allotments as designed on Plate 3 as follows:

#### LICENSEES QUALIFIED FOR ALLOTMENT

Name	Allotment Area (Sec.)	No. Waters Reliable	Supple- mentary	Area Serviced	No. Livestock Licensed (1937)
Akers, J. E. & E. E.	11½	/	2	5½	75 Cattle 7 Horses
Bennett, Mina	11½	/	3	6	50 " 4 "
Bennett, F. L. & J. T.	31	3	2	29	300 " 6 "
Brownfield, W.R. & E.O.	119¾	7	5	91½	350 " 14 "
B. T. Ranch Co.	80	5	3	79	1200 "
Carpenter, J. C.	1½	0	0	0	
Cauhope, J. P.	81¼	2	9	81	62 C. 30 H. 5416 S. 466 G.
Chandler, Geo.	8	1	1	8	10 C. 12 H. 515 G.
Clayton, Joe A.	2¾	2	1	3	25 C.
Coffelt, Snow & Robertson	50	2	6	50	312 C. 12 H.
Cox, A. B.	187¾	4	11	176	1900 C. 25 H.
Cox, Fred W.	2	/	1	2	100 G.
Davis & Brown	6¾	0	1(Dry)	0	
Gage, Howell, et al.	95½	4	2	94	418 C. 15 H. 3500 S.
Gage, J. E.	3½	/	2	4	65 C.
Gage, J. W. et al.	4¼	/	1	4	68 C. 4 H.
Gage, W. A. & A.	21½	1	11	22	20 C. 2 H. 800 S. 1000 G.
Gardner, J. H.	26½	1	1	26	150 C. 4 H.
Gray, Robin	8	1		10	56 C. 26 H.
Gray, Ivan	7¾	1		10	
Guess, H. D.	5½	/	3	6	85 C. 7 H. 1800 G.
Guadalupe Ranch	200	8	7	183	1250 C. 130 H.
Hepler, Charles	29	4	2	28	350 C. 20 H.
Hurt, Maude A.	18½	1	3	20½	125 C. 4 H.
Iribarne, Michel	12¾	3	2	12	8 C. 3500 S. 19 G.
Jones, Alton	15½	1	1	16	200 C. 6 H.
Jones, T. W.	17¾	1		18	90 C. 15 H.
Kilgore, Chas. W.	5	1	3	5	20 H. 250 S.
Kitchens, Drue	18¾	2	1	19	135 C. 6 H.
Lee, Don T.	40	4	11	36	650 C. 30 H.
Lewis, Arch	5¼	/	2	5	

LICENSEES QUALIFIED FOR ALLOTMENT

Name	Allotment Area (Sec.)	No. Waters Reliable	Supple- mentary	Area Serviced	No. Livestock Licensed (1937)
Lewis, David C.	17 $\frac{1}{4}$	2		12	40 C. 11 H. 100 G.
Lewis, Dempson	20 $\frac{1}{4}$	1		17	30 C. 2 H.
Lewis, Denmon F.	33 $\frac{1}{2}$	5	1	34	150 C. 6 H.
Lewis, Ira W. H. & R.	44	1	1	44	140 C. 15 H.
Lewis, J. H. et al.	30	1	1	31	100 C. 16 H.
Lewis, Martin	83 $\frac{1}{4}$	2	8	83	222 C. 65 H.
Lewis & Woods	8 $\frac{1}{4}$	2		8	Nonuse
Lewis, S.W. & Family	88 $\frac{1}{2}$	5	8	85	588 C. 80 H. 3260 S.
Magby, Jess	1	1	1	1 $\frac{3}{4}$	25 C. 15 H. 500 G.
McCarron, Jack	25 $\frac{3}{4}$	1	2	25	260 C. 8 H.
McGregor, L. & C. Co.	293 $\frac{1}{2}$	4	8	267 $\frac{1}{2}$	1400 C. 30 H.
Merritt, J. F. & Sons	23	1	4	20	15 C. 20 H. 1850 S.
Mossier, W. W.	4 $\frac{1}{2}$	/	2	5	2 C. 6 H. 385 S.
Nevar, Jose	20	1		16	150 C. to Laura Babb.
Otero Inv. Co.	304 $\frac{1}{4}$	16	7	277	973 C. 5 H. 2046 S.
Plowman, J. J.	4 $\frac{1}{2}$	1	1	5	3 C. 19 H.
Prather, O. & J.	181 $\frac{1}{2}$	11	21	182 $\frac{1}{2}$	800 C. 279 H. 2800 S. 680 G.
Queen, Victor J.	4 $\frac{1}{2}$		2	5	67 C. 5 H.
Quick, M. & A.	2		1	3 $\frac{1}{2}$	28 C. 2 H.
Ranch Realty Co.	195 $\frac{1}{2}$	6	10	148 $\frac{1}{2}$	1824 C. 20 H.
Shattuck, W. R. Owning:-					
Effindale Pasture	3 $\frac{1}{2}$	1		4	63 C. 10 H. 150 S.
Dog Canyon Hills	11		4	12	
Headquarters	1	2		1	
O. M. Lee					
Shockley Pasture	43 $\frac{3}{4}$	3	3	43	550 C.
Smith, Alva	2 $\frac{3}{4}$	/	1	2 $\frac{1}{2}$	45 C. 6 H.
Thomas, R..N.	10 $\frac{1}{4}$	/	2	11	600 G.
Tidwell, Ira	6	/	4	6	70 C. 20 H. 385 G.
Trammell, C. W.	2	/	2	2 $\frac{1}{4}$	42 C.
Walbridge Rch. Co.	91 $\frac{1}{2}$	8	2	87 $\frac{1}{2}$	360 C. 42 H. 4264 S.
Wimberly, W. T.	40	4	2	39	340 C. 8 H.
Woods, C. L.	8 $\frac{3}{4}$	1	2	9	2 C. 30 H.
Wright, Ellis	0	/	1	$\frac{3}{4}$	Free Use

#### RANGE SURVEYS STAFF

A. D. Molohon, Chief of Range Surveys  
J. Q. Peterson, Land Classifier  
Milo H. Deming, Associate Range Examiner  
Hugh M. Bryan, Associate Range Examiner  
241 Federal Building, Salt Lake City, Utah

#### REGIONAL OFFICERS IN CHARGE

Region 1 - L. Wayne Larson, P. O. Box 1740, Salt Lake City, Utah  
Region 2 - - -  
Region 3 - Walter R. Bell, 305 Lyon Building, Reno, Nevada  
Region 4 - Gilmer L. Hankins, Division of Grazing, Burns, Oregon  
Region 5 - Kenneth B. Platt, 709 Idaho Street, Boise, Idaho  
Region 6 - A. H. Shunk, Federal Building, Billings, Montana  
Region 7 - R. D. Nielson, 307 Rosenwald Building, Albuquerque, New Mexico  
Region 8 - Warren J. Gray, 305 Post Office Building, Grand Junction, Colorado  
Region 9 - - -  
Region 10 - Stewart Kern, 205 Federal Building, Rawlins, Wyoming

#### JUNIOR RANGE EXAMINERS

Ralph H. Abbott  
Albert Agee  
E. G. Bailey  
John Benson  
John J. Boyle  
Evert L. Brown  
J. Calvin Croft  
Douglas A. Cross  
J. D. Dillard  
James C. Farrell  
J. J. Greenwald  
Clarence M. Gulovson

Orison P. Haley  
Merlynn S. Harvout  
Thomas M. Herbert  
Sylvester Martin  
Dalton Meeks  
Stephen Miera  
Donald S. Moffitt  
Dale C. Naylor  
J. Earl Palmer  
Charles Parsell  
Charles Pedlar  
Roy Persson

Vern Peterson  
James Powers  
Ray V. Redd  
Francis H. Riordon  
Harvey M. Salmon  
Norman Sargent  
William B. Smith  
Seth C. Swift  
Rowland G. Thompson  
Sydney Whetstone  
D. C. Woods

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Floyd Harmon  
Maxwell W. Carter  
Paul A. Baucum  
Heber L. Carter

Otis A. Fulcher  
Tom J. Sawyer  
Stephen Wallace  
Howard Whitecrow  
Charles C. Wilhoite

## DISTRICT ADVISORS

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L. U. Chamberlain, Kanab, Utah  
Earl A. Childers, Short Creek  
LeRoy H. Cox, St. George, Utah  
Alex Findlay, Kanab, Utah  
John F. Findlay, St. George, Utah  
Lindau Foremaster, St. George, Utah  
Ensign Griffiths, Mt. Trumbull  
James L. Hatch, Panguitch, Utah  
Fred C. Heaton, Moccasin  
Dan Judd, Fredonia  
Charence Lamoreaux, Cedar City, Utah  
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John C. Miller, Panguitch, Utah  
Cecil C. Pugh, Kanab, Utah  
Harold Reber, Littlefield  
Donald Schmutz, St. George, Utah  
John H. Schmutz, St. George, Utah  
Jean Uthuralt, Bakersfield, California  
Royal B. Woolley, Ogden, Utah

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Gus Duncan, Kingman  
Wm. A. Epperson, Chloride  
I. L. Hart, Phoenix  
E. L. Jameson, Kingman  
John M. Neal, Kingman  
Tommy Walker, Kingman  
T. G. Walter, Yucca

### Arizona Grazing District No. 4

A. J. Bryce, Pima  
Thomas Cauthen, Clifton  
J. B. Cook, Willcox  
Harry A. Day, Duncan  
L. C. Knape, Bowie  
Porter McEuen, Eden  
Leslie Montierth, Fort Thomas  
J. M. Smith, Central  
J. M. Wilson, Safford

### California Grazing District No. 1

A. J. Alexander, Onyx  
Leonard Bidart, Bakersfield  
P. Sumner Brown, Kernville  
John Dangberg, Minden, Nevada  
Henry Evans, Jr., Bishop  
Delbert Fallon, Yerington, Nevada  
Edward Fulstone, Topaz  
C. W. Fulton, Bridgeport  
Alfred Giraud, Bishop  
J. H. Lubkin, Lone Pine  
John J. Mathieu, Benton  
Gregorio Mendiburu, Bakersfield  
Perry Morgan, Wichman, Nevada  
William Symons, Laws

E. G. Taylor, Benton  
Guy Terry, Coleville  
Jean Uthuralt, Poso Bridge Station,  
Bakersfield  
J. I. Wagy, Bakersfield  
Elmer S. Wedertz, Wellington, Nevada  
N. J. Williams, Caliente

### California Grazing District No. 2

Antone Avilla, Bieber  
Victor F. Christensen, Likely  
George M. Clark, Alturas  
P. S. Dorris, Alturas  
Andy Duque, Reno, Nevada  
J. J. Fleming, Wendel  
Fred E. Galeppi, Doyle  
Arthur Harris, Eagleville  
Frank Iverson, Bieber  
Jim McClelland, Standish  
L. E. McCulley, Cedarville  
Ivie McGarva, Likely  
James Marr, Ravendale  
Frank Murphy, Eagleville  
Harry Schadler, Fort Bidwell  
H. B. Stephens, Fort Bidwell

### Colorado Grazing District No. 1

Horace Coltharp, Vernal  
Malvin Crawford, Meeker  
Tom Cuddy, Fruita  
John Kenney, Meeker  
Walter Oldland, Rio Blanco  
Carl Osborn, Fruita  
Gust Pappas, Rifle  
R. H. Pitchforth, Salt Lake City, Utah  
Roy Templeton, Maybell  
Alex Urie, Pagoda  
John A. Wilcoxson, De Beque  
Carl Wood, Rifle

### Colorado Grazing District No. 2

J. W. Holland, Wolcott  
Andrew Lindstrom, Dillon  
Alex McDermott, Steamboat Springs  
Charles P. Murphy, Spicer  
M. E. Noonan, Kremmling  
A. M. Powell, Clark  
George Steele, Parshall  
George Watson, Eagle  
John F. White, Cowdrey

### Colorado Grazing District No. 3

Bruce Blackstock, Gunnison  
H. Bert Ennor, Grand Junction  
Orville Fender, Carbondale  
W. T. Freeman, Montrose  
J. S. Hoffman, Montrose  
Leon Hotchkiss, Hotchkiss

Uri Hotchkiss, Colona  
S. C. Lauderback, Snowmass  
Charles N. Leslie, Glade Park  
Fred MacDonald, Gunnison  
Ed Mahaffey, Grand Valley  
Frank H. Means, Saguache  
N. H. Meeker, Jr., Gunnison  
Kelso Musser, Delta  
G. L. Noren, Silt  
S. J. Phillips, Ridgway  
W. S. Whinnery, Lake City  
Grant Youmans, Powderhorn

Colorado Grazing District No. 4

Edgar Bray, Redvale  
John Harris, Laplata, New Mexico  
Joseph B. Hersch, Pagosa Springs  
Charles Jacobs, Norwood  
W. R. McCabe, Dolores  
Harry Morgan, Dolores  
Chester J. Petty, Durango  
Marion Ray, Nucla  
Harry Rogers, Dolores  
John Rogers, Norwood  
John Shahan, Chromo  
George Standifird, Fruita  
Ethan A. Tracy, Norwood  
W. W. Wallace, Mancos

Colorado Grazing District No. 6

Waller Barnes, Lily  
George C. Bassett, Greystone  
Sam Carr, Greystone  
R. J. Conway, Craig  
Stanley Crouse, Greystone  
A. W. Dickinson, Jr., Rock Springs, Wyo.  
Walter Ducey, Craig  
W. W. McWilliams, Craig  
Walter Plotts, Maybell  
John J. Sherman, Craig  
Harold F. Spragg, Baggs, Wyoming  
W. T. Stillings, Lay  
Chauncy L. Storms, Craig  
W. E. Sweet, Greystone  
Louis Visintainer, Craig  
Stanley J. Wyatt, Craig

Idaho Grazing District No. 1

Charles Abbott, Hagerman  
Joe Asdale, Three Creek  
J. O. Beck, Mayfield  
Laurence Bettis, Gannett  
T. J. Booth, Boise  
J. Ervin Condit, Bliss  
Sherman Glenn, Ola  
Charles V. Harris, Sheaville, Oregon  
Rowland J. Hawes, Three Creek  
Worth S. Lee, Mountain Home  
Ambrose A. Maher, Cliffs  
Chauncey Payne, Emmett  
Harry B. Soulen, Weiser  
J. A. Tarter, Weiser  
Asa L. Williams, Boise  
George Zapp, Nampa

Idaho Grazing District No. 2

Scott Allred, Gannett  
Wallace Baker, Dietrich  
Hassel Blankenship, Hailey  
Dan Cavanagh, Twin Falls  
Max D. Cohn, Arimo  
Jesse H. Dredge, Malad  
Don G. Fredericksen, Gooding  
Charles Irwin, Heyburn  
Milton T. Jones, Malad  
Fred Martin, Shoshone  
Angus R. MacRae, Paul  
E. U. McIntire, Kimberly  
B. Thomas Morris, Pocatello  
Elmer Nielson, Wendell  
A. D. Pierce, Malta  
W. J. Tapper, Richfield  
Joel W. Thompson, Bliss  
James Turnbull, Carey  
Wesley B. Ward, Elba

Idaho Grazing District No. 3

A. Rowley Babcock, Moore  
L. D. Cox, Shelly  
Archie A. Grover, Springfield  
George D. Grubb, Idaho Falls  
A. M. Hatch, Moreland  
John W. Hays, Dubois  
William H. Jones, Moore  
James Laird, Idaho Falls  
John McAfee, Darlington  
Ben H. Matkins, Hamer  
E. Dean Orme, St. Anthony  
John T. Poole, Menan  
J. R. Raumaker, Hamer  
Paul P. Spalding, American Falls  
Fred Woodie, Howe

Idaho Grazing District No. 4

Alex Bellantyne, Caldwell  
Thomas E. Campbell, Clayton  
Bert Coates, Chilly  
Ora Cockrell, May  
Verne Coiner, May  
Merle L. Drake, Challis  
Sherman Furey, May  
George Howell, Carmen  
Steve Mahaffey, Tendoy  
Doyle L. Mulkey, Baker  
Milford Vaught, Mackay  
Floyd Whittaker, Leadore

Montana Grazing District No. 1

P. T. Anderson, Turner  
J. L. Bailey, Turner  
William Barnard, Telegraph Creek  
Archie Carberry, Fourchette  
Auburn Coe, Malta  
Alvin P. Dahlquist, Thoeny  
John David, Vandalia  
John Etchart, Tampico  
Floyd Hardin, Malta  
Henry C. Kuhr, Cleveland  
C. H. Newton, Glasgow

George Petrie, Turner  
Walter Risen, Lovejoy  
Thomas Ross, Chinook  
Luther Schultz, Hinsdale  
Purl Seibert, Midale  
Hal Thompson, Riedel  
Arthur W. White, Hinsdale  
Perry Wilson, Regina  
George O. Zook, Turner

Montana Grazing District No. 2

V. Ward Bratten, Winnett  
N. H. Buttleman, Glendive  
James B. Elliot, Jr., Lavina  
Ralph J. Gardner, Weldon  
D. C. Geib, Edwards  
Wesley G. Grant, Jordan  
O. M. Green, Roundup  
Albert O. Harmel, Terry  
M. A. Hickey, Roy  
Ralph Jensen, Roy  
Hobart McKean, Circle  
Chris McRae, Terry  
J. C. Miller, Roundup  
E. W. Wayman, Ingomar  
J. L. Wheeler, Forsyth  
Frank C. Wright, Oswego

Montana Grazing District No. 3

Elmo Asbury, Tee Dee  
Joe Bradshaw, Locate  
Orvel Campbell, Mizpah  
A. J. Irion, Olive  
Charles H. Johnston, Ridgway  
Charles Johnstone, Broadus  
Earl W. Kildahl, Horton  
P. S. Richardson, Powderville  
William Tauck, Ridgway  
William Tonn, Miles City  
C. L. Woods, Alzada  
Fred W. Zook, Volberg

Montana Grazing District No. 4

C. W. Fees, Warren  
Ole A. Hetland, Fromberg  
J. O. Higham, Belfry  
Clarence A. Hoskin, Bridger  
H. P. Loyning, Warren  
Joe J. Pokarney, Jr., Fromberg  
Clarence Provinse, Bridger  
Claude St. John, Hillsboro

Montana Grazing District No. 5

J. H. Bray, Lakeview  
Charles P. Brenner, Grant  
Emmett Douglass, Whitehall  
W. F. Garrison, Reichle  
W. B. Gleed, Lima  
Frank Husted, Wise River  
Walter C. Jones, Wise River  
Ted Knowles, Boulder  
Emmett Morrow, Divide  
Frank O'Connell, Townsend  
Ike T. Rife, Armstead  
O. A. Schulz, Sheridan

Leslie Smith, Toston  
F. P. Tate, Melrose

Nevada Grazing District No. 1

W. W. Brown, Ogden, Utah  
George W. Garat, Tuscarora  
Walter Gilmer, Metropolis  
Gordon Griswold, Elko  
A. G. McBride, Elko  
E. R. Marvel, Battle Mountain  
George Ogilvie, Lee  
John M. Prunty, Charlestown  
William Rand, Palisade  
Alfred W. Smith, Ruby Valley  
Emery C. Smith, Wells  
R. B. Stewart, Golconda  
Frank Truett, Metropolis

Nevada Grazing District No. 2

Virgil Buchanan, Winnemucca  
R. H. Cowles, Reno  
O. C. Dickinson, Reno  
Thomas Dufurrena, Denio, Oregon  
Peter Etchart, Winnemucca  
Tom Griswold, Lovelock  
Martin Lartirigoyen, Cedarville,  
California  
E. R. Marvel, Battle Mountain  
Ramon Montero, Winnemucca  
E. A. Settelmeyer, Reno  
F. B. Stewart, Paradise Valley  
George M. Tierney, Cedarville, Calif  
Phil Tobin, Winnemucca  
Ed Waltz, Gerlach

Nevada Grazing District No. 3

Harry Anderson, Carson City  
B. F. Baker, Mina  
William Blackwell, Coleville, Calif  
Virgil Connell, Simpson  
H. F. Dangberg, Minden  
George Henrichs, Yerington  
Peter Henrichs, Yerington  
John Uhart, Carson City  
Walter W. Whitaker, Fallon  
Wayne Wightman, Fallon

Nevada Grazing District No. 4

George H. Eldridge, Aumum  
Charles Funk, Preston  
D. C. Gardner, Lund  
Ed Halstead, Duckwater  
Walter Handley, Eureka  
Albin C. Kirkeby, Ely  
C. R. Moorman, Ely  
Jas. C. Riordan, Lund  
D. C. Robison, Ely  
Harry Smith, East Ely  
A. M. Swallow, Garrison, Utah  
William Warren, Ursine  
J. L. Whipple, Lund  
John P. Wright, Hiko  
Arthur Yelland, Aumum

Nevada Grazing District No. 5

Harley Adams, Bunkerville  
Anthony W. Atkin, St. George, Utah  
Rex Bell, Nipton, California  
Willard H. George, Arden  
Luther Hafen, Mesquite  
Max Hafen, Mesquite  
John A. Lundell, Cedar City, Utah  
Joe F. Perkins, Overton  
John F. Perkins, Overton  
Naoma Bullock Simpson, Las Vegas  
Ether Swapp, Overton

New Mexico Grazing District No. 2

H. B. Birmingham, Magdalena  
J. E. Davenport, Espanola  
George Goze, Magdalena  
Alex C. Hare, Bloomfield  
B. P. Hovey, Cabezón  
James L. Hubbell, Datil  
Floyd W. Lee, San Mateo  
G. C. Luna, Los Lunas  
Arthur N. Pack, Abiquiu  
Kelsey Presley, Gallup  
A. G. Seis, Albuquerque  
R. Bruce Sullivan, Bayfield, Colorado  
Tom Summers, Springerville, Arizona  
Frank Wood, Aztec  
A. D. Woofter, Magdalena

New Mexico Grazing District No. 3

A. D. Brownfield, Florida  
Tom Clayton, Separ  
R. W. Cureton, Lordsburg  
C. G. Durrill, Strauss  
G. D. Hatfield, Deming  
Marlin Hoggett, Animas  
Edward James, Chloride  
M. W. McGrath, Silver City  
Holmes Maddox, Animas  
J. P. Nunn, Hillsboro  
Shelby Phillips, Gage  
Robt. W. Reid, Hillsboro  
Fred Sherman, Deming  
W. A. Winder, Nutt

New Mexico Grazing District No. 4

Eugene Baird, Alamogordo  
Vincente Del Curto, Socorro  
Walker Durham, Engle  
William W. Gallacher, Carrizozo  
Curtis Johnson, Tularosa  
Jack Pierce, Adobe  
Ernest Potter, Tularosa  
T. A. Spencer, Carrizozo  
J. V. Taylor, Carrizozo  
Jess C. Williams, Las Cruces

New Mexico Grazing District No. 5

E. O. Brownfield, Alamogordo  
Frank R. Bryant, El Paso, Texas  
A. B. Cox, El Paso, Texas  
LeRoy Gage, Pinon  
Oliver M. Lee, Alamogordo  
Frank Lewis, Pinon  
Malcolm McGregor, El Paso, Texas  
J. L. Merritt, Lovington  
Owen Prather, Alamogordo

New Mexico Grazing District No. 6

Jake U. Gross, Caprock  
H. A. Hamill, Hope  
J. J. Lane, Roswell  
John Lusk, Carlsbad  
T. J. McKnight, Picacho  
Jack McWhorter, Dunlap  
Stinson Martin, Dunlap  
Lon Merchant, Capitan  
H. B. Smyrl, Roswell  
Fields Waller, Roswell  
S. L. Williams, Artesia  
Velva Wilson, Felix

Oregon Grazing District No. 1

James B. Doherty, Bonanza  
Henry C. Gerber, Klamath Falls  
John S. Horn, Bonanza  
Denis D. O'Connor, Klamath Falls

Oregon Grazing District No. 2

Paul J. Brattain, Paisley  
C. E. Campbell, Paisley  
J. C. Cecil, Suntext  
Ralph Chambers, Burns  
J. B. Fine, Frenchglen  
John C. Flynn, Lakeview  
Tim Guinee, Summer Lake  
R. B. Jackson, Wagontire  
David T. Jones, Suntext  
Frank Kueny, Andrews  
W. G. Lane, Silver Lake  
Walter Lehmann, Lakeview  
John Madariaga, Andrews  
Louis Mauzey, Adel  
Jack O'Keefe, Adel  
George A. Smyth, Andrews  
James Wakefield, Adel  
George Whiting, Burns

Oregon Grazing District No. 3

John Brosnan, Ontario  
Jack Fairman, Ontario  
J. N. Jones, Juntura  
Martin Joyce, Juntura  
James McEwen, Riverside  
J. C. Medlin, Harper  
Paul Peterson, Crane  
Andrew Robinson, Ontario  
Charles Sutherland, Vale

Oregon Grazing District No. 4

John Archabal, Boise, Idaho  
Alex Ballantyne, Caldwell, Idaho  
J. J. Ballard, McDermitt, Nevada  
John Baltzor, Arock  
Pasco Eiguren, Arock  
Andrew Greeley, Rockville  
Sam Ross, Jordan Valley  
S. K. Skinner, Jordan Valley  
Jack Swisher, Jordan Valley

Oregon Grazing District No. 5

J. R. Breese, Prineville  
Charles Brown, Roberts  
Joe Bryson, Roberts  
Paul D. Buker, Post  
Priday B. Holmes, Terrebonne  
Earl H. Laughlin, Paulina  
Charles A. Sherman, Roberts  
Jack Shumway, Powell Butte  
H. I. Stearns, Prineville  
A. R. Teater, Post  
Dominique Verges, Roberts  
Melvin Weberg, Suplee  
Harvey Winslow, Bend

Oregon Grazing District No. 6

Charles H. Colton, Baker  
John W. Densley, Richland  
Norvil M. Greener, Halfway  
Chriss Lee, Baker  
Cordon Ragsdale, Baker  
F. Wilbur Smith, Durkee  
F. C. Vaughan, Baker  
J. R. Wanker, Medical Springs  
Charles Wendt, Baker

Utah Grazing District No. 1

D. H. Adams, Layton  
George Carson, Salem  
L. G. Carter, Park Valley  
T. L. Davis, Brigham City  
J. H. Francis, Morgan  
James S. Hopkins, Croyden  
L. B. Johnson, Randolph  
C. E. Kunzler, Rosette  
Leo McKinnon, Randolph  
M. S. Merriott, Ogden  
Willard Petersen, Hyrum  
Roy Pugsley, Rosette  
Newell Richins, Grouse Creek  
Roy Showell, Snowville  
H. C. Simpson, Yost  
Samuel S. Simpson, Grouse Creek  
W. J. Thornley, Layton  
Jesse Tracy, Yost

Utah Grazing District No. 2

C. N. Bagley, Callao  
A. M. Bertagnoli, Salt Lake City  
Bert Burraston, Goshen  
Don Clyde, Heber City

George Cowan, Payson  
J. M. Creer, Spanish Fork  
Murray A. Eliason, Grantsville  
Earl Greathouse, Lynndyl  
John E. Jensen, Moroni  
John H. Lunt, Nephi  
J. M. MacFarlane, Salt Lake City  
L. C. Montgomery, Heber City  
Sidney E. Nicholes, American Fork  
James L. Nielson, Fountain Green  
Reed A. Phillips, Devils Slide  
Enos A. Stookey, Clover  
Paul E. Wrathall, Grantsville  
W. S. Young, Wanship

Utah Grazing District No. 3

Lawrence Christensen, Delta  
James Dearden, Garrison  
Selby O. Dixon, Payson  
Morgan Griffith, Milford  
C. B. Hawley, Richfield  
Virgel P. Jacobson, Fountain Green  
John James, Fayette  
Walter James, Black Rock  
B. Stanley McKnight, Minersville  
James C. Robinson, Parowan  
Blaine Sevy, Panguitch  
H. H. Stevens, Salt Lake City  
Leo Stott, Meadow  
Wilford W. Watts, Kanosh  
F. D. Williams, Minersville  
George Wiltshire, Circleville  
T. Tracy Wright, Murray  
Alvin Yardley, Beaver

Utah Grazing District No. 4

Walden Ballard, Rockville  
Frederick G. Carroll, Orderville  
A. C. Christensen, New Castle  
Jos. B. Dalton, Parowan  
Ward Esplin, St. George  
Jed Fawcett, St. George  
Rex Rudolph Frei, St. George  
Wayne Gardner, St. George  
Lafayette Hall, Hurricane  
W. W. Houston, Panguitch  
Alvin Judd, Kanab  
Edward T. Lamb, Mount Carmel  
G. D. McDonald, Kanab  
Lyman E. Sevy, Cedar City  
Elmer Taylor, New Harmony  
Thomas A. Topham, Paragonah

Utah Grazing District No. 5

Earl Albrecht, Fremont  
Claud V. Baker, Boulder  
R. J. Brinkerhoff, Bicknell  
R. B. Gleave, Widtsoe  
John H. Johnson, Tropic  
Emery King, Teasdale  
R. A. Meeks, Bicknell  
E. M. Moore, Henrieville  
V. W. Pace, Richfield  
Wallace N. Roundy, Escalante

Lester Spencer, Escalante  
S. E. Tanner, Loa  
William S. Swapp, Kanab

Utah Grazing District No. 6

J. Ernest Adams, Blanding  
Roy D. Akin, Dolores, Colorado  
J. M. Bailey, Monticello  
D. L. Goudelock, Moab  
G. A. Harris, Greenriver  
George W. Johnson, Moab  
R. L. Kirk, Jr., Moab  
Charles Lapham, Sapinero, Colorado  
George O. Patterson, Moab  
Charles Redd, Lasal  
A. M. Robertson, Moab  
J. A. Scorup, Moab  
J. A. Somerville, Moab  
L. L. Taylor, Moab  
Albert Turner, Cisco  
Claud L. Young, Monticello

Utah Grazing District No. 7

J. M. Conover, Ferron  
William A. Cook, Huntington  
Q. G. Crawford, Rochester  
George H. Franz, Greenriver  
Hyrum Jensen, Spring City  
Ray Jensen, Castledale  
James Liddell, Price  
Rex Mathis, Price  
Pierre Moynier, Price  
Bryant A. Nelson, Ferron  
Glenn N. Nelson, Price  
Nick Salevurakis, Price  
T. W. Smith, Greenriver  
Stylian Staes, Price  
C. A. Winters, Castledale

Utah Grazing District No. 8

H. L. Allred, Roosevelt  
W. A. Banks, Vernal  
Ashley Bennion, Vernal  
Lafe Brown, Provo  
Leo Calder, Vernal  
E. W. Garrison, Greystone, Colorado  
John S. Hacking, Vernal  
Paul S. Hanson, Roosevelt  
Joseph Haslem, Jensen  
Thomas Jarvie, Linwood  
Mahlon Marshall, Jensen  
W. H. Oaks, Vernal  
John Albert Pace, Price  
William S. Perry, Lapoint  
Alvin F. Preston, Dragon  
J. Harold Reader, Vernal  
H. E. Seeley, Vernal  
Keith Smith, Linwood  
M. A. Smith, Salt Lake City  
R. S. Squier, Watson  
B. H. Stringham, Vernal  
S. A. Wells, Myton  
Gilbert Wild, Ouray

Wyoming Grazing District No. 1

Eric Carlson, Worland  
L. J. Davis, Ten Sleep  
Wilmer Dye, Worland  
Howard Flitner, Greybull  
Robert Gordon, Ten Sleep  
Hans Hansen, Lovell  
V. V. Hayes, Lucerne  
S. C. Hyatt, Hyattville  
William Kyne, Thermopolis  
C. F. Lampman, Greybull  
Herman Mayland, Emblem  
A. S. Myers, Burlington  
Eugene Phelps, Pitchfork  
Lloyd Robbins, Grass Creek  
A. J. Schnorr, Ten Sleep  
Edgar Simpson, Belfry  
W. B. Snyder, Lovell  
W. O. Steele, Worland  
James S. Tebbs, Cowley  
Willard A. Waldo, Ten Sleep  
Stanley Walters, Hyattville

Wyoming Grazing District No. 2

John E. Blaisdell, Split Rock  
Frank Brennan, Shoshoni  
Walter G. Graham, Moneta  
Robert Grieve, Casper  
Kleber H. Hadsell, Rawlins  
D. F. Hudson, Lander  
Sandford Mills, Lander  
Frank Rate, Lost Cabin  
Ben Roberts, Split Rock  
G. F. Schoonmaker, Lander  
W. H. Sherlock, Lander  
Luther Sproule, Riverton

Wyoming Grazing District No. 3

Edward Cardwell, Leo  
R. E. Chace, Medicine Bow  
A. E. Dahl, Saratoga  
W. W. Daley, Rawlins  
Charles Ellis, Difficulty  
Morris C. Larsen, Rawlins  
James L. McIntosh, Split Rock  
Arthur H. Rasmussen, Rawlins  
O. C. Sheehan, Dixon  
Anthony Stratton, Rawlins  
Charles Vivion, Rawlins  
E. C. Withrow, Hanna

Wyoming Grazing District No. 4

Sylvester Broadbent, Salt Lake City, Utah  
T. J. Brough, Lyman  
John C. Erickson, Rock Springs  
Clem Eyres, Lyman  
W. H. Gottsche, Rock Springs  
Robert W. Greig, Eden  
John W. Hay, Jr., Rock Springs

William Hussman, Lonetree  
Paul Juel, Rock Springs  
Adolph L. Magagna, Rock Springs  
Wm. F. Mau, Cokeville  
Julian Neff, McKinnon  
Ralph O. Nelson, Kemmerer  
J. D. Noblitt, Cokeville  
Payson W. Spaulding, Evanston  
T. S. Taliaferro, III, Rock Springs  
Herman Teichert, Cokeville  
T. A. Welch, Burntfork  
W. E. Wright, Farson

Wyoming Grazing District No. 5

John C. Budd, Big Piney  
L. M. Hennick, Pinedale  
James Jensen, Boulder  
Dr. E. S. Lauzer, Rock Springs  
R. J. Luman, Cora  
Frank McGinnis, La Barge  
L. C. Nelson, Boulder  
T. D. O'Neill, Big Piney  
James I. Sims, La Barge  
Frank Steele, Pinedale





